DOCUMENT RESUME

ED 363 206 HE 026 816

AUTHOR	Keyes-Welch, Michelle; Martin, Debbie
TITLE	Generalist Physician Initiatives in U.S. Medical Schools.
INSTITUTION	Association of American Medical Colleges, Washington, D. C.
PUB DATE	93
NOTE	106p.
AVAILABLE FROM	Association of American Medical Colleges, 2450 N. Street, N.W., Washington, DC 20037-1129 (free).
PUB TYPE	Reports - General (140)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*Admission (School); Community Services; Department Heads; *Educational Policy; *Family Practice (Medicine); Higher Education; *Medical Schools; *Mission Statements; Patient Education; Physicians; Politics of Education; Primary Health Care; Rural Areas; *Student Financial Aid; Surveys
IDENTIFIERS	Diversity (Faculty)

ABSTRACT

This report presents responses from 126 medical school deans to a 1993 survey designed to assess the current status of generalist initiatives within medical schools. The survey questions addressed: aspects of the institution's mission; generalist physician involvement in key committees within the medical school; preferential admission programs and financial aid assistance available to medical students interested in the generalist specialties; and the presence of political pressure on the school to increase the production of generalist physicians. A preliminary analysis includes a summary of the responses. The bulk of the report contains program descriptions of initiatives in 107 medical schools to promote interest in generalism. Organized by state, each description includes a brief summary of the school's initiative (both implemented and proposed) as well as the name of a contact person. The report contains two indexes: an index of existing generalist initiatives and revised programs; and an index of newly established or proposed generalist initiatives. (GLR)

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AAMC ASSOCIATION OF AMERICAN MEDICAL COLLEGES

GENERALIST PHYSICIAN INITIATIVES IN U.S. MEDICAL SCHOOLS

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AAMC ASSOCIATION OF AMERICAN MEDICAL COLLEGES

GENERALIST PHYSICIAN INITIATIVES IN U.S. MEDICAL SCHOOLS

By Michelle Keyes-Welch and Debbie Martin

In the cover photograph, Boston University School of Medicine first-year student, Mathieu Bermingham, examines a patient at the Dorchester House Multi-Service Center. The picture was graciously supplied by the Boston University Medical Center Department of Public Relations. The photographer is David Herwald.

The Association of American Medical Colleges represents all 126 accredited U.S. medical colleges, the 16 Canadian medical schools, 89 academic and professional societies, 400 major teaching hospitals—including 74 Veterans Affairs centers—and the nation's medical students.

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ACKNOWLEDGEMENTS

We would like to acknowledge the 126 U.S. medical schools who responded to our survey, with particular thanks to the individuals who provided the information needed to complete Part II of this document.

We also appreciate the helpful comments provided by Donald Kassebaum, M.D., Vice President of the Division of Educational Research and Assessment at AAMC. LaTanya Johnson provided assistance with editing the document in its final stages. Finally, Joseph Kolb of the Graphic Issue ably assisted with the layout and design of the publication.

TABLE OF CONTENTS

PART I

INTRODUCTION TO PART I ____ I

Analysis of Survey Questions ____ V

PART II

METHODOLOGY ____ 1

Program Descriptions

University of South Alabama College of Medicine ____ 3

University of Arizona College of Medicine ____ 3

University of Arkansas College of Medicine ____ 3

University of California, Los Angeles, School of Medicine ____ 4

University of California, San Diego, School of Medicine ____ 4

University of California, San Francisco, School of Medicine ____ 5

University of Southern California School of Medicine ____ 5

Stanford University School of Medicine ____ 5

University of Colorado School of Medicine ____ 6

University of Connecticut School of Medicine ____ 7

Yale University School of Medicine ____ 7

George Washington University School of Medicine and Health Sciences ____ 8

Georgetown University School of Medicine ____ 9

Howard University College of Medicine ____ 9

University of Florida College of Medicine ____ 9

University of Miami School of Medicine ____ 10

University of South Florida College of Medicine ____ 10

Medical College of Georgia School of Medicine ____ 11

Mercer University School of Medicine ____ 12

Morehouse School of Medicine ____ 13

University of Hawaii John A. Burns School of Medicine ____ 13

University of Health Sciences/Chicago Medical School ____ 14

University of Illinois College of Medicine at Chicago ____ 15

University of Illinois College of Medicine at Rockford ____ 15

Northwestern University Medical School ____ 16

Rush Medical College of Rush University ____ 16

Southern Illinois University School of Medicine ____ 16

Indiana University School of Medicine ____ 17

University of Iowa College of Medicine ____ 18

University of Kansas Medical Center School of Medicine ____ 18

University of Kentucky College of Medicine ____ 19

University of Louisville School of Medicine ____ 19

Louisiana State University School of Medicine in New Orleans ____ 21

Louisiana State University School of Medicine in Shreveport ____ 21
University of Maryland School of Medicine ____ 22
Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine ____ 22
Boston University School of Medicine ____ 23
Harvard Medical School ____ 24
University of Massachusetts Medical School ____ 24
Tufts University School of Medicine ____ 25
Michigan State University College of Human Medicine ____ 26
University of Michigan Medical School ____ 27
Wayne State University School of Medicine ____ 27
Mayo Medical School ____ 28
University of Minnesota-Duluth School of Medicine ____ 28
University of Minnesota Medical School—Minneapolis ____ 28
University of Mississippi School of Medicine ____ 29
University of Missouri-Columbia School of Medicine ____ 29
University of Missouri-Kansas City School of Medicine ____ 30
Washington University School of Medicine ____ 30
Creighton University School of Medicine ____ 32
University of Nebraska College of Medicine ____ 32
University of Nevada School of Medicine ____ 33
Dartmouth Medical School ____ 33
University of Medicine and Dentistry of New Jersey Robert Wood Johnson Medical School ____ 34
University of New Mexico School of Medicine ____ 35
Albany Medical College ____ 37
Albert Einstein College of Medicine of Yeshiva University ____ 38
Columbia University College of Physicians and Surgeons ____ 39
Cornell University Medical College ____ 39
Mount Sinai School of Medicine of the City University of New York ____ 39
New York Medical College ____ 40
University of Rochester School of Medicine and Dentistry ____ 41
State University of New York Health Science Center at Brooklyn College of Medicine ____ 41
State University of New York at Buffalo School of Medicine and Biomedical Sciences ____ 42
State University of New York at Stony Brook Health Sciences Center School of Medicine ____ 43
State University of New York Health Science Center at Syracuse College of Medicine ____ 43
Bowman Gray School of Medicine of Wake Forest University ____ 44
Duke University School of Medicine ____ 45
East Carolina University School of Medicine ____ 45
University of North Carolina at Chapel Hill School of Medicine ____ 47
Case Western Reserve University School of Medicine ____ 48
Medical College of Ohio ____ 48

Northeastern Ohio Universities College of Medicine ____ 48
Wright State University School of Medicine ____ 49
University of Oklahoma College of Medicine ____ 50
Oregon Health Sciences University School of Medicine ____ 50
Hahnemann University School of Medicine ____ 51
Jefferson Medical College of Thomas Jefferson University ____ 52
Medical College of Pennsylvania ____ 53
Pennsylvania State University College of Medicine ____ 54
University of Pennsylvania School of Medicine ____ 56
University of Pittsburgh School of Medicine ____ 57
Temple University School of Medicine ____ 57
Universidad Central del Caribe School of Medicine ____ 58
Brown University School of Medicine ____ 58
Medical University of South Carolina College of Medicine ____ 59
University of South Carolina School of Medicine ____ 60
University of South Dakota School of Medicine ____ 60
East Tennessee State University James H. Quillen College of Medicine ____ 61
Meharry Medical College School of Medicine ____ 61
University of Tennessee College of Medicine ____ 62
Vanderbilt University School of Medicine ____ 62
Texas A&M University Health Science Center College of Medicine ____ 64
Texas Tech University Health Sciences Center School of Medicine ____ 64
University of Texas Southwestern Medical Center at Dallas Southwestern Medical School ____ 65
University of Texas Medical School at Galveston ____ 66
University of Texas Medical School at Houston ____ 67
University of Utah School of Medicine ____ 67
University of Vermont College of Medicine ____ 68
Medical College of Virginia School of Medicine/Virginia Commonwealth University ____ 68
University of Virginia School of Medicine ____ 69
University of Washington School of Medicine ____ 70
Marshall University School of Medicine ____ 71
West Virginia University School of Medicine ____ 72
Medical College of Wisconsin ____ 73
University of Wisconsin Medical School ____ 73

PART I

SURVEY ANALYSIS

PART I
INTRODUCTION

Many studies have estimated that approximately 1/3 of the nation's practicing physicians are generalists. There is an increasing demand for services provided by these doctors which may exceed the current supply of generalist physicians. Increasing the supply of physicians in family medicine, general internal medicine or general pediatrics can play an important role in providing additional affordable and accessible health care. These physicians will also play an important role in the health care system of tomorrow. Several organizations such as the American Medical Association (AMA), Council on Graduate Medical Education (CoGME), Association of American Medical Colleges (AAMC) and many specialty societies have expressed concern over the declining interest in the generalist specialties among medical students and a specialist/generalist mix that may not be appropriate for meeting the health care needs of the country.

The AAMC Generalist Physician Task Force advocated, as an overall national goal, that a majority of graduating medical students be committed to generalist careers (family medicine, general internal medicine or general pediatrics) and that appropriate efforts be made by all schools so that this goal can be reached within the shortest possible time. The Task Force statement was subsequently approved by the AAMC governance.

Following the development of the generalist policy statement in the fall of 1992, a two-page survey was distributed to the Dean of each U.S. medical school to assess the current status of generalist initiatives within the institutions. We also asked each school to forward a description of their generalist initiatives; this information is included in part II of the publication. Non-respondents were contacted in the spring of 1993; all 126 surveys were returned to the AAMC by late spring. While every school responded to the survey, not all institutions answered every question or provided generalist program descriptions for part II.

The first three questions of the survey address the institution's mission statement and the extent to which the mission statement focuses on the generalist initiative and other aspects of medical education. Question four analyzes generalist physician involvement in key committees within the medical school. Questions five and six address preferential admission programs and financial aid assistance available to medical students interested in the generalist specialties. Finally, in question seven, we asked each institution whether the state had exerted any political pressure on the school to increase the production of generalist physicians. The analysis includes a summary of the responses as well as descriptions of the pressures exerted on medical schools.

It is hoped that this survey analysis and accompanying program descriptions will assist medical schools in planning generalist initiatives and encouraging institutions to develop programs focusing on family medicine, general internal medicine and general pediatrics.

QUESTION ONE:

THE MEDICAL SCHOOL MISSION STATEMENT

We asked each Dean to forward a copy of the medical school's mission statement. Some mission statements were available from the AAMC collection of medical school catalogues; each school was asked to verify if the attached copy was the most current. We received current mission statements from 119 of the 126 U.S. medical schools. We analyzed each mission statement for several key phrases demonstrating the institution's commitment in a particular area. The following pages describe each topical area we studied as well as the aggregate responses from the medical schools.

TEACHING, PATIENT CARE AND RESEARCH

Not surprisingly, all 119 schools' mission statements indicated an institutional commitment to teaching and education. The institution's commitment to patient care and the provision of health care are also addressed by all 119 medical school mission statements. Regarding research, 116 medical schools outlined the institutional obligations to basic and clinical research; the other three institutions did not address medical research within the mission statement.

STUDENT AND FACULTY DIVERSITY

We also examined the mission statements for information describing each school's responsibilities in recruiting and retaining minority faculty and students. Thirty schools' mission statements address the institutional responsibilities in this area. These thirty schools represent all regions; two-thirds of the respondents are public institutions. We compared these schools with the *AAMC Institutional Goals Ranking Report*[1] on the number of underrepresented minority graduates from each school during 1987-1991. Of the thirty schools, nine are located in the first quartile of schools in the proportion of underrepresented minority students. Seven schools are in each of the three remaining quartiles.

CONTINUING MEDICAL EDUCATION

Forty-six schools have mission statements which address the institutional commitment to continuing medical education for faculty, staff and community physicians. These respondents represent both public (thirty-two schools) and private (fourteen schools) institutions as well as all geographic regions.

PUBLIC AND COMMUNITY SERVICE, COMMUNITY HEALTH, DISEASE PREVENTION

We analyzed each mission statement for information regarding an institutional responsibility for community or public service. One third of the respondents (forty-one schools) have mission statements which specifically address an institutional commitment to public and community service in addition to providing direct patient care. Private (thirty schools) and public (eleven schools) institutions are represented among these respondents as well as representation from all geographic regions.

Seventy-seven schools' mission statements address the responsibilities for improving the health of the population. Thirty of the seventy-seven schools also specified a public or community service commitment. Many of the seventy-seven schools identified the specific

[1]Association of American Medical Colleges. *1992 Institutional Goals Ranking Report*. Washington, D.C.: AAMC, 1992.

population to be served; some mission statements list more than one population area. Twenty-seven mission statements refer to improving the health care needs of the community; forty-seven mission statements address the health of a specific state, and twenty-five mission statements refer to a region, defined as a multi-state area. Twenty-five mission statements address the institutional responsibilities for improving national health, and seventeen mission statements refer to institutional responsibilities for improving the health of the poor and underserved.

Forty-two mission statements indicate an institutional responsibility in preventing disease. Of the forty-two schools, fifteen schools also address the institutional commitment in public and community service or improving the health care of a defined population. Seventeen of the forty-schools have mission statements which address all three areas described in this section. Only ten of the forty-two schools address disease prevention without referencing the health care status of a population or public/community service. The forty-two respondents represent twenty-nine public and thirteen private institutions. The respondents are located in all of the geographic regions of the country, with the most respondents (seventeen) in the Southern region.

RURAL HEALTH

We studied each mission statement for references to rural health. Of the 119 mission statements received, seven specifically address an institutional commitment to rural health care. Five of the seven schools are located in the Southern region; one is located in the Western region, and one is located in the Central region. Six of the seven schools are public institutions; five of the seven received their initial accreditation after 1960. All seven schools require and/or provide elective rural health experiences within the medical school curriculum, including clerkships and preceptorships.

PRIMARY CARE AND SPECIALTY CARE

We examined each mission statement for information addressing the institutional commitment to graduating primary care (generalist) or specialist physicians. No school's mission statement addresses the institution's commitment to graduating only specialists. Sixteen of the 119 respondents indicated an institutional commitment to graduating primary care physicians. Three geographic regions (Southern, Central and Western) are represented among the respondents. All sixteen schools require clerkship experiences in primary care during medical school; some institutions require clerkships or courses during multiple years. We also compared these schools and the *AAMC Institutional Goals Ranking Report*. This report rank-orders the number of 1987 graduates entering the primary care specialties (family medicine, general internal medicine or general pediatrics). Among the sixteen respondents, six are located in the top quartile in the production of generalist physicians; seven are located in the second quartile, and the remaining three schools are located in the third or fourth quartiles. All sixteen schools have departments of family medicine; nine schools also list separate sections/divisions of general pediatrics or general internal medicine. The remaining seven schools only list the separate basic science and clinical departments in the *Directory of Medical Education*[2] without referencing sections or divisions within departments.

An additional thirteen of the 119 respondents refer to the institutional commitment to both the generalist specialties and select non-generalist specialties. The mission statements reference the need for certain non-generalist specialties in short supply within the state, but no specific non-generalist specialties are listed within the mission statement.

[2]Association of American Medical Colleges. *Directory of American Medical Education, 1992-1994*. Washington, D.C.: AAMC, 1992.

HUMANISTIC VALUES, INDEPENDENT STUDY, LEADERSHIP DEVELOPMENT

We examined each mission statement for the institution's role in developing certain personal characteristics that may be desirable in a practicing physician.

Seventy-five schools' mission statements address an institutional commitment to graduating compassionate physicians with humanistic values. All geographic regions are represented; thirty-seven of the seventy-five respondents are private institutions. Forty-eight schools list required courses within the *AAMC Curriculum Directory*[1] that may stress humanistic traits. Course titles include: "Behavior in the Doctor-Patient Relationship", "Human Values in Medicine", and "The Art of Medicine".

We identified fifty-eight schools with mission statements addressing the need for lifelong learning and the institution's commitment to encouraging independent study habits among students. These mission statements stress the importance of continued scholarship throughout medical practice and the need for physicians to develop independent learning skills. These respondents represent all geographic regions of the country; thirty-one schools are public institutions.

Twenty-three mission statements specifically address an institutional commitment to developing leadership skills and capabilities. All geographic regions are represented; thirteen of the twenty-three schools are public institutions. Eight of the twenty-three schools are among the top quartile of institutions in the percentage of graduates who are faculty, according to the 1992 *AAMC Institutional Goals Ranking Report*.

HEALTH CARE POLICY

Seventeen institutions have mission statements which outline a commitment to educating students about health policy and including health policy instruction within the curriculum. Five of the seventeen schools are private institutions; all geographic regions are represented. Five of the seventeen schools require course work in health care policy; nine additional schools provide electives in health policy within the curriculum. Five of the seventeen schools have separate sections or divisions of health policy (or a similar title) within the medical school administrative structure.

QUESTION TWO

DOES YOUR SCHOOL'S MISSION STATEMENT ACCURATELY REFLECT THE EDUCATIONAL PHILOSOPHY AND GOALS OF YOUR INSTITUTION?

In the second survey question, schools were asked whether their mission statements accurately reflect the educational philosophy and goals of the institution. One hundred and twelve respondents felt that their mission statement reflected institutional goals. The respondents vary considerably in their production of generalist graduates; all geographic regions are represented.

Eleven schools believe that their mission does not reflect the institution's philosophy on generalist physicians. We analyzed the institutional rankings in primary care of the eleven respondents. Three schools are in the top quartile in the production of primary care graduates; two are in the second quartile; two schools are in the third quartile, and the remaining four schools are in the fourth quartile in the production of generalist graduates. Ten of the eleven

[1]Association of American Medical Colleges. *1992-1993 Curriculum Directory*. Washington, DC: AAMC, 1992.

schools have plans to change their mission statements regarding generalist physicians. The one school that did not indicate plans to change the mission statement is located in the fourth quartile in the production of generalist graduates.

Three schools did not provide responses to this question.

QUESTION THREE

ARE THERE ANY PLANS TO CHANGE YOUR SCHOOL'S MISSION STATEMENT AS REGARDS TO GENERALIST PHYSICIANS?

The medical schools were asked if there are any plans to change the mission statement regarding generalism. Although all 126 schools returned the survey, one school did not respond to this question. Twenty-nine schools indicated that they have plans to change the mission statement to address generalism. Of the twenty-nine schools, twenty-one are public institutions, and eight are private. The respondents are not uniformly distributed geographically. Thirteen schools are located in the South; ten are located in the Northeast, and three each are in the West and Central regions. We also compared the institutional rankings among the twenty-nine respondents. Ten of the twenty-nine schools rank in the top quartile in the percentage of graduates entering one of the generalist specialties. Six schools are located in the second quartile; seven schools are located in the third quartile, and six schools are located in the fourth quartile. Only four of the twenty-nine mission statements focus on the institution's generalist commitment. Two other schools mention the generalist specialties in addition to non-generalist specialties within their mission statement.

A total of ninety-six schools responded "no" to question three. We categorized these "no" responses into four groups based on the additional information that the schools provided: 1) the school recently changed the mission statement; 2) the school believes the mission statement is already strong regarding generalism; 3) the school is undecided whether to change the mission statement, or 4) the school does not plan to change the mission statement. Respondents in the fourth grouping replied "no" but did not provide any additional information.

Nine schools responded "no" because the mission statement has been revised. Six of the schools are public institutions. Three schools are located in the Northeast; four are located in the Central region, and one each are in the Southern and Western regions. We compared these nine schools with the institutional rankings in generalism. Four of the nine schools that recently changed their mission statement to address generalism are located in the first quartile; there is one school in the second quartile and two each in the third or fourth quartiles. Two of the schools' mission statements specifically focus on generalism, and one additional school focuses on generalism and select non-generalist specialties.

Nine respondents indicated that there are no plans to change the mission statement of the school because the document already focuses on the institution's primary care commitment. Seven of the schools are public institutions. Four schools are located in the Central region; one is in the Northeast region; three are located in the Southern region, and one is in the Western region. It is interesting to note that only three of these schools rank in the top quartile in graduating students who enter the generalist specialties. Three schools are located in the second quartile, two are in the fourth quartile, and one is located in the third quartile. Only one mission statement specifically mentions generalism; one additional school focuses on generalism and select non-generalist specialties.

Twelve schools either indicated that the institution is undecided whether it should change the mission statement or the issue is under discussion. These respondents are distributed across all geographic regions and represent both public and private institutions. We

compared the schools with their institutional rankings to determine the percentage of graduates entering the primary care specialties. Five of the twelve schools are located in the top two quartiles; five schools are located in the third quartile, and two schools are located in the fourth quartile. No school's mission statement presently focuses solely on the generalist specialties, but one mission statement addresses the institution's commitment to generalism and select non-generalist specialties.

Sixty-six schools replied "no" to question three but did not provide additional comments. These respondents are distributed evenly across all geographic regions and represent both private and public institutions. We also consulted the AAMC's *Institutional Goals Ranking Report* for more information on the schools' production of generalist physicians. Fourteen schools are located in the first quartile in the production of generalist graduates; seventeen schools are located in the fourth quartile, and thirty-five schools are located in the middle quartiles.

QUESTION FOUR

DO PHYSICIANS REPRESENTING THE GENERALIST SPECIALTIES HOLD POSITIONS ON KEY ADMINISTRATIVE COMMITTEES AT YOUR INSTITUTION?

We surveyed each medical school to determine whether generalist physicians hold positions on key administrative or planning committees within the medical school; all 126 medical schools responded to this question. One hundred twenty-four schools responded "yes" to this question. Only two schools indicated that generalist physicians are not members of key committees.

Schools were asked to list the medical school committees in which generalist physicians are members. Most schools provided multiple responses. We tabulated the committees and the frequency of responses. Ten committees are listed by at least 10% of the respondents. The most frequently cited committee is the curriculum committee; eighty-two schools indicated that generalist physicians are members of the curriculum committee. The admissions committee is the next frequently cited committee, with sixty-seven schools responding. Other committees include: executive committee (forty-four responses), student promotions (forty responses), faculty senate/faculty affairs (thirty-three responses), faculty promotion and tenure (twenty-eight responses), clinical education (twenty-two responses), graduate medical education (eighteen responses), Dean's advisory committee (thirteen responses), and conduct of research/biomedical research (twelve responses). Many other committees were identified, but fewer than twelve schools listed these committees.

QUESTION FIVE

DOES YOUR SCHOOL'S ADMISSION COMMITTEE GIVE SPECIAL WEIGHT TO APPLICANTS WHOSE CHARACTERISTICS AND BACKGROUNDS SUGGEST THEY WOULD BE MORE LIKELY TO BECOME GENERALIST PHYSICIANS?

We surveyed the medical schools to determine if a formalized selective admissions program is available for students interested in the generalist specialties. All 126 medical schools responded to this question.

Fifty-five schools indicated that they have a formalized selective admissions program in place. All geographic regions are represented. Forty of the fifty-five schools with a selective admissions program are public institutions. We also compared this group of respondents and their production of generalist physicians. Twenty-three of the fifty-five schools are located in the first quartile, and twenty-five schools are located in the middle two quartiles. Only seven schools with a selective admissions program are among the schools in the fourth quartile in the production of generalist physicians. Eleven of the fifty-five respondents specifically address the institution's commitment to generalism within the mission statement, and an additional eight schools refer to the institution's commitment to generalist and select non-generalist specialties.

Many of the fifty-five respondents also described the specific personal characteristics beyond an interest in the generalist specialties which are given special weight in admission decisions. Some schools listed multiple personal traits that are considered in the admissions process. Nineteen schools indicated a preference for candidates with a rural background and/or candidates who express an interest in a rural practice. Three schools give preference points to candidates who express an interest in practicing in the generalist specialties in an underserved area. Seven schools give special preference to applicants with an interest in community and public service; these seven schools are in addition to the three that address providing health care to the underserved. One school seeks candidates with an interest in the medical humanities in addition to generalism.

The remaining seventy-one schools indicated that the institution does not have a formal selective admissions program in place. However, eleven schools indicated that the admission committee is aware of the need for more generalist physicians and informally gives preference points to students who express an interest in one of the generalist specialties. These eleven schools vary considerably in their production of graduates choosing a generalist specialty. An additional fifteen schools indicated that the development of a selective admissions program is under review or will be implemented in the future. These schools also varied considerably in their production of graduates who chose a generalist practice. Three of the fifteen schools expressed concerns about the effectiveness of a selective admissions program and the limited data discussing the implementation and evaluation of these programs. The remaining forty-five schools responded "no" without additional information.

DOES YOUR SCHOOL OFFER SCHOLARSHIPS, LOANS, OR LOAN-FORGIVENESS PROGRAMS THAT FAVOR STUDENTS WHO PURSUE GENERALIST CAREERS?

We surveyed each medical school to determine if the institution offers loan and/or scholarship programs preferentially to students who plan to pursue family medicine, general internal medicine, or general pediatrics. One hundred and twenty-five schools responded to this question; one school did not reply.

Fifty-nine schools indicated the presence of a loan and/or scholarship program favoring students who plan to pursue a generalist career. All geographic regions are represented, with the most respondents located in the Southern region. Forty-six of the fifty-nine schools are public. Respondents varied considerably in their production of graduates who choose a generalist practice. Twenty-two schools are located in the first quartile; seventeen schools are located in the second quartile, and the remaining twenty schools are located in the third or fourth quartiles in the production of generalist physicians. We also compared the responses to this question and the mission statements of the medical schools. Eleven of the fifty-nine schools specifically mention the institution's commitment to generalism within the mission statement. An additional eight schools mention generalist specialties in addition to select non-generalist specialties.

Nine schools are among the fifty-nine respondents indicated above; however, these schools administer loan and/or scholarship programs funded wholly or in part by their respective state. These institutions are often responsible for the administration of financial programs and the identification of aid recipients but may not have as much jurisdiction over the funding levels over time.

Sixty-six schools indicated that their institutions do not have a financial aid program favoring students who plan to pursue generalist careers. Seven of the sixty-six schools indicated that they plan to develop these programs in the future. The remaining fifty-nine schools did not indicate any plans for a preferential financial aid program. Many schools described existing loan or scholarship programs available to medical students regardless of practice plans. Other financial aid programs are available to underrepresented minority students in any specialty field. These fifty-nine schools represent all geographic regions of the country. Twenty-one schools are located in the top two quartiles in the production of generalist physicians; the remaining thirty-eight schools are located in the third or fourth quartile. Five of the fifty-nine schools have mission statements that specifically address generalism; an additional four schools have mission statements discussing the institution's responsibility to generalist and select non-generalist fields.

QUESTION SEVEN

HAS YOUR SCHOOL BEEN UNDER ANY POLITICAL PRESSURE FROM THE STATE TO INCREASE THE PRODUCTION OF GENERALIST PHYSICIANS?

We surveyed the medical schools to determine if any state was exerting pressure on an institution to graduate more generalist physicians. One hundred and twenty-five schools provided responses; one school did not answer this question.

Sixty-eight schools indicated that their institution has received pressure from the state. The state legislature, Governor's office or state health planning commission have expressed the most concerns to medical schools about the specialty imbalance. Many of the sixty-eight respondents identified areas in which states are exerting pressure. These include: requiring curricular modifications, expanding residency slots in the generalist specialties, proposing a differential reimbursement system for generalist physicians, requiring additional school reports on student recruitment and specialty choice, and requiring additional ambulatory care or community-based training sites. Schools also indicated that state funding could or would be linked to the school's production of generalist graduates or a specific goal established by the state. The respondents represent all geographic regions of the country; there are twenty-six respondents from the Southern region; eighteen are located in the Northeastern region; thirteen are from the Central region, and eleven are located in the Western region. Fifty of the sixty-eight schools are public institutions. These schools vary considerably in their production of generalist physicians with twenty-four respondents located in the first quartile in the production of generalist physicians. Nineteen schools are located in the second quartile, and the remaining twenty-five schools are located in the third or fourth quartiles. Eleven of the sixty-eight schools have mission statements which address the institution's role in the generalist initiative. An additional eight schools address the generalist issue as well as select non-generalist fields.

Fifty-seven schools have not experienced pressure from the state to increase the production of generalist physicians. All geographic regions are represented, but two-thirds of the respondents are located in the Northeastern or Central regions. Thirty-four of the fifty-seven schools are private, and twenty-three are public institutions. The respondents also varied in their production of generalist physicians; nine schools are located in the top quartile, eleven schools are located in the second quartile, and thirty-seven schools are located in the third or fourth quartiles. While these fifty-seven schools are not experiencing state pressure to increase the production of generalist physicians, five respondents indicated pressures from generalist specialty societies, state physician groups, university administration or the institution's board of trustees to increase the production of generalist physicians.

PART II:
PROGRAM
DESCRIPTIONS

PART II
METHODOLOGY

Part II contains descriptions of initiatives in 107 U.S. medical schools that promote interest in generalism among students and residents.

The information was gathered by writing to the Deans of U.S. medical schools requesting descriptions of programs that encourage the choice of generalist careers among medical students and residents. Initially, 30 schools responded to the October 1992 inquiry. In January 1993, a second request was mailed and another 47 schools responded. A final call for descriptions was made at the April 1993 AAMC Council of Deans meeting. This effort generated 30 additional responses. The program descriptions were provided by the individual listed as the contact person or were abstracted from published articles. The bibliography is organized alphabetically by state, and the medical schools are arranged alphabetically within each state.

The AAMC *1992 Institutional Goals Ranking Report* was used as the source for the percentage of 1987 medical school graduates practicing in generalist fields. Longitudinal data regarding percentages of graduates practicing in generalist fields or statistics concerning more recent resident matches were reported by the schools.

Three categories of programs are included: 1) long-standing programs; 2) recent initiatives (1991-1993); and 3) proposed programs that have received funding and will be implemented within the next two years. The latter category refers primarily to schools that were recipients of the Robert Wood Johnson Foundation Generalist Physician Initiative Grants, announced in November 1992. Also, some schools submitted information about state or federal government programs.

The innovations cover all aspects of medical education. Premedical recruitment and admission initiatives include: 1) recruitment of students whose personal charcteristics indicate they may be likely to choose a generalist career; 2) affiliations with rural and inner-city high schools and undergraduate colleges; and 3) programs combining the fourth year of college with the first year of medical school.

Medical school curricula are introducing students to patient care in community-based clinical settings as early as the first week of school. Along with the basic science curriculum, courses are being revised to emphasize the humanities and continuity of care experiences. Community-based physicians are serving as educators and role models, as well as faculty. These community-based physicians present students with opportunities to provide care to underserved populations and see patients outside of the medical school setting.

Utilization of ambulatory training sites, in both rural and inner-city communities, provide more primary care opportunities for residents. Multidisciplinary training models are being developed to broaden the scope of problems seen.

Financial incentives are available to medical students, residents, and entering physicians in return for service in the generalist areas. Finding ways to reward and raise the status of generalist faculty members is a priority at many institutions. Others are working with state and federal governments to address inequities in the reimbursement system. A number of schools have appointed a generalist task force to study methods for increasing their institution's commitment to graduating generalists.

An index appears at the end of this document.

ALABAMA

The *UNIVERSITY OF SOUTH ALABAMA COLLEGE OF MEDICINE*, in an effort to select students more likely to become practicing generalists, reserves a minimum of 25% (16) of the positions in the entering class for students from rural counties. If there are not enough qualified rural students to meet this goal, the balance of the class is selected from the group of qualified non-rural students. A task force of faculty and private physicians is currently developing additional recommendations for supporting generalist careers.

For additional information contact: Jim L. Wilson, M.D., Chair, Department of Family Practice, University of South Alabama College of Medicine, Mobile, Alabama 36688.

ARIZONA

The UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE has a strong commitment to generalist physician education. Since 1971, over 40% of the college's graduates have gone into generalist residencies, and as of 1992, over 30% of these remain in primary care practice.

Recent initiatives include the recruitment of a family practitioner to head the four-semester Preparation for Clinical Medicine course. This initiative introduces students to the concepts of generalism during their first and second years.

For the past 15 years, third-year students have taken a required six-week clerkship in family medicine. Recently, the Department of Internal Medicine revised the 12-week clerkship from an inpatient experience to an 8-week inpatient experience and a 4-week outpatient experience in general medicine. Starting in July 1993, part of the required ambulatory care experience in internal medicine will take place in a health maintenance organization. The Department of Internal Medicine and the General Medicine Section are working together to change the traditional residency curriculum to a primary care curriculum.

The college is now reviewing both its curriculum and its educational philosophy with the goal of making revisions to enhance the education of the generalist physician.

For additional information contact: Jay W. Smith, M.D., Vice Dean for Academic Affairs, The University of Arizona Health Sciences Center, Tucson, Arizona 85724.

ARKANSAS

Medical students at the UNIVERSITY OF ARKANSAS COLLEGE OF MEDICINE are eligible for financial benefits if they choose to practice a primary care specialty, especially in underserved areas. Under the Arkansas Rural Medical Practice Student Loan and Scholarship Program, a maximum of $12,000 per academic year is available to each student. The loans are forgiven and converted to grants after the borrower completes residency training and begins full-time practice in a rural community in Arkansas. For each continuous year of practice, one full year's loan plus accrued interest are canceled.

ARKANSAS *continues on next page*

In addition, the Arkansas State Legislature in 1991 passed the Physicians Recruitment and Retention Grant Program. Physicians who practice in a rural community with a population of less than 8,000 become eligible to receive grants: $6,000 for the first year of full-time practice; $8,000 for the second year; $10,000 for the third year; $12,000 for the fourth year; and $14,000 for the fifth and final year of the grant program.

For additional information contact: Tom G. South, Director, Student Financial Aid, Slot 709, University of Arkansas for Medical Sciences, College of Medicine, 4301 West Markham, Little Rock, Arkansas 72205.

CALIFORNIA

Beginning in September 1993, three fourth-year students at the **UNIVERSITY OF CALIFORNIA, LOS ANGELES, SCHOOL OF MEDICINE** who are interested in primary care can apply for the California Community Scholarship Program for Family Physicians. The scholarship will cover tuition and provide $1000 per month in living expenses. Upon completion of residency training in family medicine, general internal medicine, or pediatrics, participating physicians are eligible for one year of loan-forgiveness (this applies to any type of medical school debt incurred) for each year of primary care practice within the Los Angeles County health service system.

The first-year component of a new course, Doctoring, was piloted in 1992. The course stresses the skills needed for becoming a practicing physician through problem solving and community-based learning. Eventually, this course will be offered during all four years of medical school.

For additional information contact: Teddie Milner, Office of Student Affairs, Deans Office, UCLA School of Medicine, 405 Hilgard Avenue, Los Angeles, California 90024.

The **UNIVERSITY OF CALIFORNIA, SAN DIEGO, SCHOOL OF MEDICINE** has modified recruitment and admission efforts to attract underrepresented minorities. The school's application packet is being revised to inform perspective students of the school's interest in graduating generalists. One-third of the school's 1987 graduates are now practicing in either family medicine, general internal medicine, or general pediatrics.

Within the undergraduate curriculum students receive an early introduction to generalist role models. The first-year required Doctor-Patient Relationship course is directed by the chief of family medicine. Nearly 40% of all first- and second-year students take the Introduction to Clinical Family Medicine elective course. Also offered in years one and two is "Doctors Ought to Care," an elective program that allows 50 students per quarter to provide health education in San Diego schools and migrant camps.

The third-year required pediatrics clerkship is 50% ambulatory care-based and mainly primary care. The Department of Pediatrics, in association with its Area Health Education Centers, allows one or two third-year students to experience direct patient assessment, care, and management. The required third-year medicine clerkship piloted an ambulatory care component in 1992-93. Beginning in the 1994-95 academic year, a third-year required six-week primary care clerkship will be offered. About 80% of fourth-year students take the minimum of one month of ambulatory care in primary care rotations.

A strong cross-cultural component has drawn national attention to the school's family medicine residency program. The medicine residency recently received federal support for a community-based track. During 1990, the pediatrics residency program converted to a primary care track.

For additional information contact: Ruth M. Covell, M.D., UCSD, Office of the Dean, School of Medicine, 9500 Gilman Drive, La Jolla, California 92093-0602.

The UNIVERSITY OF CALIFORNIA, SAN FRANCISCO, SCHOOL OF MEDICINE requires fourth-year students to complete an eight-week ambulatory primary care clerkship. Since 1980 the clerkship has been coordinated by the Department of Family and Community Medicine. The 70 clinical sites available include family practice residency clinics, primary care internal medicine clinics, community sites, and home care programs located in inner-city, suburban, rural, and military sites. Students spend five or six half days per week at the sites and another two half days in seminars covering topics such as the management of common ambulatory problems. Data from a recent study (*Family Medicine* 25[January 1993]:34-40) indicates that this clerkship experience has contributed to continued student interest and understanding of both family medicine and primary care internal medicine.

For additional information contact: William B. Shore, M.D., Department of Family and Community Medicine, AC-9, UCSF, San Francisco, California 94143.

The UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE offers students direct patient contact during the first two years through the Introduction to Clinical Medicine course. Starting in July 1993, all students will be required to take a six-week core clerkship in ambulatory primary care. Students are encouraged to take the clerkship during their third year, though they may also take it during the fourth year. The clerkship can take place with a community-based physician, or at one of the school's family practice residency programs.

Beginning with the 1993-94 academic year, three fourth-year medical students interested in primary care will be eligible to apply for the California Community Scholarship Program for Family Physicians. The scholarship will cover tuition and provide $1000 per month in living expenses. Upon completion of a residency in family medicine, general internal medicine, or pediatrics, participating physicians are eligible for one year of loan-forgiveness (this applies to any type of medical school debt incurred) for each year of primary care practice within the Los Angeles County health service system.

For additional information contact: Stephen J. Ryan, M.D., Interim Dean, USC School of Medicine, 1975 Zonal Avenue, KAM 300, Los Angeles, California 90033.

STANFORD UNIVERSITY SCHOOL OF MEDICINE offers a flexible curriculum that allows students to take six years to achieve the M.D. degree, thus providing opportunity for a variety of educational experiences.

The Preparation for Clinical Medicine Course, available in preclinical years two, three, or four, has been redesigned and now stresses patient history and physical examination as the prime diagnostic tools. During the first half of this course, students spend three hours

CALIFORNIA *continues on next page*

per week for 12 weeks in the community with practicing internists and family practitioners. In the course's second half, students spend 12 to 16 hours per week for 12 weeks at community practice sites.

Starting in June of 1993, all medical students will be required to take a one-month ambulatory care clerkship at family medicine sites. Students can take the clerkship at anytime during years three through six.

Several years ago, the school of medicine adopted a new method for recruiting and rewarding faculty, the Medical Center Line. This "line" allows faculty to be recruited and retained based on excellence in clinical care and teaching. This has increased the number of generalists with faculty positions. Generalists are now in charge of the major clerkships in medicine and ambulatory care.

The school has established an Office of Public Service Opportunities to assist interested students with gaining hands-on experience in providing health care to underserved communities.

For additional information contact: Charlotte Jacobs, M.D., Senior Associate Dean of Education and Student Affairs, Stanford University Medical Center, Stanford, California 94305-5302.

COLORADO

Nearly one-half (62) of the 1992 graduating class of the **UNIVERSITY OF COLORADO SCHOOL OF MEDICINE** matched in either family medicine, internal medicine, or pediatrics through the National Resident Matching Program. About 30% (18.6) of this group will eventually enter primary practice. The school's goal is to have 70% of its students matching in a generalist specialty so that 50% will be entering generalist practice by the year 2000.

In an effort to achieve this goal, the school recently established an eight-week primary care module that includes a four-week family medicine clerkship and a four-week joint primary care clerkship. Expansion to 10 weeks (6 weeks of family medicine and 4 weeks primary care) is under consideration.

The family medicine clerkship is a community-based clinical clerkship designed to introduce third- and fourth-year students to family practice problems commonly encountered in a community setting. Students choose from over 50 clerkship sites throughout Colorado. An additional aim of the clerkship is to show students the value and role of the family physician in the community in which they practice.

The primary care clerkship allows fourth-year students to spend half their time in a medicine clinic and half their time in a community-based pediatric setting. One day per week is reserved for community experiences such as visits to nursing homes, day-care centers, Head Start, and school-based clinics.

These community-based rotations are provided through the SEARCH (Statewide Education Activities for Rural Colorado's Health)/AHEC (Area Health Education Centers). The SEARCH program reimburses student expenses, including round trip mileage and housing. Student housing is available at many of the AHEC sites.

For additional information contact: Richard D. Krugman, M.D., Dean, School of Medicine, University of Colorado Health Sciences Center, Campus Box C290, 4200 East Ninth Avenue, Denver, Colorado 80262.

CONNECTICUT

The UNIVERSITY OF CONNECTICUT SCHOOL OF MEDICINE offers a curriculum that provides students with an early community-oriented primary care experience.

The Introduction to Clinical Medicine course, which runs throughout years one and two, is staffed primarily by family medicine faculty. This course introduces students to the concepts of health and illness from the perspectives of the patient and their families. Initially, students are matched with patients in their homes and community. The students also become familiar with community resources involved in providing health care to patients. In the second part of the course, students see a variety of patients in local community hospitals, clinics, and private practices.

During the summer between years one and two, students can participate in the Family Medicine Community Preceptorship program. This program runs for 8 to 10 weeks and offers students an opportunity to provide health care to patients through community agencies.

All students must complete a community service requirement to help them better understand diverse community populations and broader public health issues. Approximately 150 students, supervised by 30 faculty physicians, provide care to 1,000 patients annually at the South Park Inn Shelter, as part of the community service requirement. Other community health activities, as part of both local and international programs, are available to students on a voluntary basis.

The third-year primary care clerkship was developed by faculty in the Departments of Family Medicine, Internal Medicine, Pediatrics, and Community Medicine. During the eight-week experience, students spend approximately 60% of their time in clinical activities in private physicians' offices or in primary care clinics within the Hartford area. The other 40% of their time is spent interacting with community agencies such as public schools, day-care centers, home care agencies, substance abuse treatment centers, public health departments, and mental health agencies. As part of the clerkship, students are required to make at least one health education presentation to a community group and to complete a special study project on a primary care topic.

For additional information contact: Bruce M. Koeppen, M.D., Ph.D., Dean for Academic Affairs and Education, University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, Connecticut 06030.

The YALE UNIVERSITY SCHOOL OF MEDICINE offers primary care curriculum experiences and activities for students. The school supports one student to participate in a summer preceptorship in family medicine (between the first and second year) at the University of Connecticut School of Medicine.

During 1992, the Department of Internal Medicine began devoting one-third of the required third-year clerkship to ambulatory medicine, focusing on primary care aspects of internal medicine. Clinical preceptors for the clerkship include physicians at community sites who practice primary care internal medicine. The preceptors permit students to interview and examine patients, develop differential diagnoses, discuss treatment with patients, and write visit notes.

In the fourth year, a required primary care clerkship provides a one-month experience. Students can choose either family medicine, general internal medicine, or general pediatrics. Clerkship sites include various primary care practices in the Yale community and

CONNECTICUT *continues on next page*

elsewhere throughout the state. Also during the fourth year, about 12 students spend one evening a week at the Wednesday Evening Clinic held in the Primary Care Center at Yale-New Haven Hospital. The students provide primary care for families, with supervision from the clinic physicians.

The medical school has been supportive of a Family Practice Interest Group that has invited family practitioners to Yale to talk about their practice and training programs.

For additional information contact: Robert H. Gifford, M.D., Associate Dean for Educational and Student Affairs, Office of Student Affairs, Yale University School of Medicine, 367 Cedar Street, New Haven, Connecticut 06510.

DISTRICT OF COLUMBIA

GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE AND HEALTH SCIENCES has initiated several programs that are responsive to both society's need for more generalists and students' need for a wider array of service opportunities. The faculty Executive Committee has recently appointed a special committee to examine issues related to increasing the number of generalist graduates.

One option open to students is a four-year combined M.D./M.P.H. program. The school has found that a majority of graduates from this program are entering primary care training. The School of Medicine and Health Sciences' public health program is currently developing other combined training programs, including one that combines four years of primary care internal medicine with public health training.

First- and second-year students can select an elective Primary Care Apprenticeship (PCA). In the first semester of the apprenticeship, students visit their primary care preceptor four times. Thereafter, they spend one afternoon per week in their preceptor's office. Issues in Health Care and Epidemiology is a required second-year course related to primary care. This course, as well as the third-year primary care clerkships, is coordinated by a combined Department of Health Care Sciences that includes Health Sciences Programs faculty and M.P.H. program faculty. This department also sponsors the primary care medicine and pediatrics residency tracks. The school has a health maintenance organization that allows students to learn about managed care and its practice.

Curriculum revisions, which will integrate clinical experiences and basic science education, and provide students with more exposure to continuity of care in ambulatory environments, are being implemented. The most significant modification is the introduction of a new course, The Practice of Medicine, which will run throughout the four years. The initial phase of this course will be introduced to first-year students in the fall of 1993. The program will require the freeing of two half-days currently occupied by basic science courses and make the PCA (currently an elective) required for all students biweekly. The Practice of Medicine course will occupy three half-day sessions per week during the first and second years. Students will spend one session per week working alternately in a preceptor's office or with clinical faculty on skills such as interviewing and physical diagnosis. Two half-days will be devoted to case-based small group discussions.

For additional information contact: Robert I. Keimowitz, M.D., Dean for Academic Affairs, George Washington University School of Medicine and Health Sciences, 2300 Eye Street, N.W., Washington, D.C. 20037.

GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE has several initiatives, some in place and others in the planning stage, which have the goal of increasing the number of graduates who select generalist careers.

During the second half of the first year and the first half of the second year, students spend one afternoon each week in the office of a primary care physician. The second part of this ambulatory practicum provides students with increasing responsibilities for patient care. For students interested in primary care, second year electives (two hours each week for 16 weeks) in family medicine and internal medicine offer additional patient interaction and responsibility. Fourth-year students are required to complete a twelve-week block of ambulatory care experience.

Beginning with the 1994 academic year, a required third-year four-week clerkship in family medicine will be implemented. The clerkship program will be co-directed by the departments of community and family medicine, medicine, and pediatrics.

The medical school's family medicine interest group invites, on alternate months, family practitioners to give presentations and seminars for interested students.

For additional information contact: William C. Maxted, M.D., Academic Dean, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., Washington, D.C. 20007-2197.

Students in good academic standing at **HOWARD UNIVERSITY COLLEGE OF MEDICINE** who demonstrate an interest in family medicine, internal medicine, or pediatrics are eligible for Department of Health and Human Services scholarships. The scholarships are available for all four years of medical school and cover tuition and fees. In return, recipients are required to practice for five years in primary health care.

For additional information contact: Charles H. Epps, Jr., M.D., Dean, Howard University College of Medicine, Washington, D.C. 20059.

FLORIDA

The **UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE** recently established the Primary Health Care Education Task Force. The task force has developed recommendations that can be implemented to help accomplish the goal of increasing the proportion of graduates who practice as generalist physicians in the region and in underserved areas. As of 1992, 18.6% of the school's graduating class of 1987 were practicing in generalist specialties.

A major aim of the college is to meet the commitment of the mission which " . . . is to enhance concordance between the educational mission of the college and the health care needs of the public . . . " In order to achieve this aim, the task force has recommended specific reforms that include: 1) adjust the composition of the admission committee to increase representation of generalist physicians; 2) educate admission committee members about the applicant characteristics, qualities, and accomplishments associated with practice as a generalist; 3) provide primary care clinical experiences during the second year to bridge the initial first-year three-week preceptorship with practicing generalists and the third-year clerkships; 4) introduce more community-based clinical education experiences during the third-

FLORIDA *continues on next page*

year clinical clerkship; 5) provide an uninterrupted block of time in the third-year family medicine clerkship; 6) lengthen the four-week ambulatory care selective in the fourth year to an eight-week interdisciplinary ambulatory care clerkship, which will be directed jointly by the three generalist departments; 7) include health maintenance organizations, rural health clinics, and urgent care centers as components of community-based clinical education; 8) establish a steering committee with representatives from the generalist departments to oversee the primary health care education component of the curriculum; and 9) enhance the status of generalist physicians within the institution and identify additional generalist physicians to serve as advisors for students to foster an interest in this area of medicine.

For additional information contact: J. Ocie Harris, M.D., Chairman, Primary Health Care Education Task Force, Director, North Florida AHEC Program, 408 W. University Avenue, Suite 306, Gainesville, Florida 32601.

Of the **UNIVERSITY OF MIAMI SCHOOL OF MEDICINE**'s graduates from 1982 through 1991, 35% chose family medicine, internal medicine, pediatrics, or the combined pathway of pediatrics and medicine training programs.

The school's admission criteria include affirmative action for applicants who have expressed a desire to enter primary care fields. Rural students planning to return to practice general medicine in rural areas are also preferentially admitted.

During 1990, the school piloted a trial curriculum: Community Clinic Experience. This is a two-year skills building curriculum that emphasizes communication and interviewing skills in the first semester, physical examination in the second semester, and problem-solving and clinical reasoning in the second year. The students are assigned, in groups of four students and one preceptor, to ambulatory clinics in underserved areas. Originally, 24 randomly selected students participated. In 1991 the number of participating first-year students was doubled. In 1992, the entire freshman class participated in the program.

All third-year students are required to take a minimum of 4 weeks of primary care rotation in addition to 12 weeks of internal medicine and 6 weeks of pediatrics. Each of the seven required third-year clerkships contain an ambulatory experience.

For additional information contact: Janet M. Canterbury, Ph.D., Deputy Dean for Medical Education, University of Miami School of Medicine, 1600 N.W. 10th Avenue, P.O. Box 016099 (R59), Miami, Florida 33101.

To enhance students' knowledge of primary care practice, the **UNIVERSITY OF SOUTH FLORIDA COLLEGE OF MEDICINE** offers the Public Sector Medicine Program. Students who select this program learn in primary care settings beginning in the first year and continuing throughout the four years of the curriculum. One afternoon each week is spent developing clinical skills and providing care to underserved populations at either the Judeo-Christian Health Clinic or the Genesis Center. Multidisciplinary faculty members provide guidance for students in this program. The impact of this experience on the students' specialty choices was recently studied (*Academic Medicine* 68[1993]:281-284).

Each third-year clerkship has a required ambulatory experience. Every senior student is required to take a selective eight-week primary care program in a generalist area. Beyond these eight weeks, seniors may select from a variety of clinical and basic science electives. Many students select additional primary care electives.

A new family practice residency is being developed along with an Area Health Education Center program to provide further opportunities for generalist physician training.

For additional information contact: Marvin R. Dunn, M.D., Dean, University of South Florida College of Medicine, 12901 Bruce B. Downs Blvd., Box 66, Tampa, Florida 33612-4799.

GEORGIA

A survey of graduating students from the **MEDICAL COLLEGE OF GEORGIA SCHOOL OF MEDICINE (MCGSM)** classes of 1988 through 1990 identified potential influences on students selecting primary care specialties (*Academic Medicine* 67[1992]:324-327). Longitudinal patient care opportunities was rated as an important factor by students interested in primary care careers.

As the recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant, the college plans to enact admission, curriculum, residency training, and practice entry programs aimed at increasing the production of generalist physicians to 50% from the current 30%.

PROPOSED:
RECRUITMENT & ADMISSION INITIATIVES:

- ❑ Increase efforts to identify and select students more likely to enter generalist practices.
- ❑ Use more generalist physicians and community leaders in the recruitment process.
- ❑ Modify admission criteria to favor applicants who are likely to choose a generalist career.
- ❑ The State Medical Education Board will provide 40 additional scholarships (10 per year) to students who commit to a generalist career.

PROPOSED:
UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Beginning early in the first year, students will have contact with generalist physicians and patients in a community-based primary care clinical setting.
- ❑ Third-year clerkships in family medicine, medicine, and pediatrics will be integrated, occupying half of the year and emphasizing continuous, comprehensive care of patients.
- ❑ A fourth-year generalist clerkship emphasizing the care of patients in ambulatory settings is being developed.
- ❑ Non-generalist clerkships will be changed to highlight the primary care aspects of these disciplines.

PROPOSED:
RESIDENCY TRAINING INITIATIVES:

- ❑ Residency training programs in family medicine, medicine and pediatrics are being modified to emphasize both ambulatory- and community-based education.
- ❑ The number of generalist residency positions will be increased.
- ❑ Residency programs will emphasize ambulatory-based experiences, both at MCGSM and in the community.
- ❑ Fourth-year residents will have the opportunity to enter junior partnerships with community physicians.

GEORGIA *continues on next page*

- ❑ A generalist fellowship will be made available to fourth-year students.
- ❑ A proposed Early Generalist Residency Admission Program would provide students an opportunity to use the fourth year of medical school as the first year of generalist residency.

PROPOSED

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ To improve the practice environment for generalist physicians, the financial disincentives of practicing in rural Georgia are being addressed. Among the financial programs under consideration are loan-forgiveness and loan repayment programs.
- ❑ The Medical College of Georgia two-way interactive Telemedicine system will be applied to the needs of generalist physcians practicing in rural areas.

For additional information contact: Francis J. Tedesco, M.D., President, The Medical College of Georgia, Augusta, Georgia 30912-4750.

Over one-half of **MERCER UNIVERSITY SCHOOL OF MEDICINE** graduates have entered residencies in the generalist specialties. Of the 59 entering students who have completed their graduate training, 68% (40) have gone on to careers in generalist areas—family practice 36% (21), general internal medicine 25% (15), or general pediatrics 7% (4).

The school's mission is to prepare primary care physicians who are responsive to the needs of the community.

CURRENT

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ All catalogs and recruitment brochures emphasize the importance of primary care at Mercer, as well as its commitment to providing doctors to practice in underserved communities and rural areas.
- ❑ During recruitment visits, students who do not show an interest in practicing in generalist specialties are discouraged from applying.
- ❑ Applicants are queried on their knowledge of rural and underserved areas in Georgia and on their potential practice location.
- ❑ Each applicant is evaluated for their potential of complying with the school's mission.

CURRENT

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ The Clinical Skills Program begins in the first year and continues for two years, offering students an opportunity to develop interviewing techniques and physical examination skills in the offices of primary care physicians.
- ❑ During the first two years, students participate in an 18-month Community Office Practice Program where they spend one afternoon biweekly in the office of a primary care physician.
- ❑ The Community Science Program, which continues throughout years one, two, and four, familiarizes students with primary care practice in rural Georgia and educates them in disease prevention and health promotion.
- ❑ All third-year students have required clerkships in family medicine, internal medicine, and pediatrics.

For additional information contact: Roger W. Comeau, Ph.D., Associate Dean for Admissions and Student Affairs/Registrar, Mercer University School of Medicine, 1550 College Street, Macon, Georgia 31207.

The goal of the **MOREHOUSE SCHOOL OF MEDICINE** Generalist Physician Initiative, funded by the Robert Wood Johnson Foundation, is to increase the number and proportion of medical students who select generalist careers. Premedical recruitment, medical school admission, curriculum, and residency training programs are all being revised. As of 1992, nearly 45% of the school's 1987 graduates were practicing in generalist fields.

Proposed initiatives include: cultivating minority high school and college students for admission; creating an integrated, problem-based curriculum; and involving medical students in primary care continuity experiences throughout the four years of medical school.

The family practice residency is being expanded and technical assistance is being provided to new family practice residencies at other institutions in order to increase the number of graduating family physicians in the Atlanta area from 5 to 35 by the year 2000. A new residency in internal medicine has been established at Grady Hospital, and a pediatric residency is also being developed.

The school plans to provide general academic fellowships in family medicine, general internal medicine, and general pediatrics. The establishment of an integrated primary care faculty development program will allow African-American faculty and community-based physicians to upgrade their teaching and precepting skills.

Morehouse School of Medicine has recently implemented a community-based primary care training initiative in cooperation with the W. K. Kellogg Foundation. This training initiative will represent approximately 28% of the total curriculum for all Morehouse medical students.

In collaboration with Emory and Georgia State Universities' Schools of Nursing and Clark Atlanta University's programs in social work and allied health, Morehouse has established partnerships with five federally-funded community health centers and clinics. The centers will eventually constitute a comprehensive, multidisciplinary, academic primary care system.

Together, the four educational institutions have created new multidisciplinary educational experiences to be conducted in the community settings: an introduction to primary care, a primary care practicum, and an introduction to community health. The medical school departments of community health/preventive medicine and family medicine will be involved in all components of the practicum. Also involved will be the pediatrics, obstetrics/gynecology, medicine, and surgery departments.

For additional information contact: Louis W. Sullivan, M.D., President, Morehouse School of Medicine, Project Director, Generalist Physician Initiative, 720 Westview Drive, S.W. Atlanta, Georgia, 30310.

HAWAII

The mission of the **UNIVERSITY OF HAWAII JOHN A. BURNS SCHOOL OF MEDICINE (JABSOM)** is to prepare its students for the practice of primary care through community-based training. In order to meet this commitment, the medical school has converted from its traditional lecture oriented curriculum and enacted Problem-Based Learning throughout the first three years of medical school.

Other curriculum changes have also been implemented, including a third-year interdepartmental continuity of care track in the transitional clerkships and a fourth-year Community Oriented Primary Care Curriculum track.

HAWAII *continues on next page*

In September of 1992, the school of medicine, joined with the schools of nursing, social work, public health, and with three existing community health clinics, and developed model, comprehensive, multidisciplinary care systems for teaching, service, and research. This partnership is funded by the W. K. Kellogg Foundation. Each clinic will work from a different model: one is family practice oriented; another is primary care specialty focused; and the third uses a nurse practitioner approach.

These community health centers will be the primary educational site for 25% of the medical school's students. Nearly 40% of their structured learning time over the four-year curriculum will be spent at one of these sites.

The school's goals are the integration of basic science and clinical instruction across all four years of the curriculum and the extension of central governance of the curriculum across the four-year M.D. program. A plan is being developed for recognition, promotion, and tenure for faculty who demonstrate their commitment to teaching and to the improvement of educational programs.

For additional information contact: Alexander S. Anderson, M.D., Director, University of Hawaii at Manoa, John A. Burns School of Medicine, Office of Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822.

ILLINOIS

The **CHICAGO MEDICAL SCHOOL** recently enacted two new primary care curriculum initiatives, a pilot clinical correlation program and a required family medicine rotation.

Nineteen freshmen were selected from a group of 53 volunteers to participate in the pilot clinical correlation program. Students are assigned to outpatient locations to observe clinical faculty from the departments of medicine and family medicine. The students maintain a bi-monthly log of patients seen, which contains relevant data such as diagnosis or problem, treatment plan, and progress. The students spend a minimum of one half-day twice-a-month with their mentor. The pilot group of students will be compared to a control group of matched cohorts to determine if there are any measurable differences resulting from the freshman clinical correlation pilot.

As of June 1993, all third-year students will be required to take a four-week family medicine rotation. This rotation was previously offered as a fourth-year elective. The objectives of the rotation are for students to learn the primary care aspects of 10 major outpatient problems and to learn treatment of patients in a family practice setting. Furthermore, it is hoped that the students will learn to assist families to understand and cope with problems associated with illness or disease, to identify community resources for the patient, and to conceptually integrate the discipline of family medicine into the overall health care system.

Chicago Medical School affiliates have funded loan repayment programs to provide $12,000 per interested student. The affiliated hospital makes a $2,000 payment at the end of the 12 months of residency and a second $2,000 payment at the end of 24 months of residency. During the PGY-3 year, when students are obligated to start repaying interest on federally guaranteed educational loans, $667 monthly payments (up to $8,000) are made directly to the appropriate lender(s). Eligible residencies include: family medicine, medicine, and psychiatry.

For additional information contact: Theodore Booden, Ph.D., Acting Dean, Associate Dean for Student Affairs, University of Health Sciences, Chicago Medical School, 3333 Green Bay Road, North Chicago, Illinois 60064.

The **UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE AT CHICAGO (UIC)** has recently piloted a Longitudinal Primary Care (LPC) program to increase students' appreciation of primary care issues. First-year students spend one half-day per month with preceptors in family practice, medicine, or pediatrics at sites located throughout the Chicago area. By the third year, students are spending one half-day per week at the preceptors practice site. One hundred and fifteen first-, second-, and third-year students are volunteer participants in the program. Special features of the program include one-on-one teaching/learning with the same preceptor for three to four years and early opportunities for on-site observation and practice.

All third-year students, including those in the LPC program, complete a four-week clerkship in family practice. The clerkship is a primary care ambulatory rotation, with students assigned to one of twelve clinical sites in private practices, community-based clinics, and hospital-based ambulatory clinics. Special features of the clerkship include clinical care of patients in a physician's office with one-on-one supervision by a family practice attending physician. One day each week is spent at the UIC Department of Family Practice in a variety of educational experiences.

For additional information contact: Annette Yonke, Ph.D., Associate Professor and Head, Longitudinal Primary Care Program, UIC College of Medicine, MC/591 or Elizabeth Burns, M.D., Professor and Head, Department of Family Practice, UIC College of Medicine, MC/663, P.O. Box 6998, Chicago, Illinois 60680-6998.

For more than 20 years the **UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE AT ROCKFORD** has offered a 2 1/2 year longitudinal, comprehensive ambulatory care curriculum centered around Community Health Centers (CHCs) that provide health care services in three rural communities. The CHCs are staffed by faculty members specializing mainly in family medicine and internal medicine, in addition to allied health professionals. All students spend two half-days per week at one of the CHCs and are assigned their own patients. By their senior year, they can be seeing up to 100 families. All family members see the same student. Care is given to assign a variety of patients to each student in order to offer the broadest and most beneficial longitudinal experience. Currently, a curriculum committee is considering integrating the family medicine/primary care CHC curriculum with the other disciplines, as well as increasing the curriculum's focus on the psychosocial and community aspects of primary care.

The college has recently designed a Rural Medical Education track (RMED) to introduce as a pilot project. Students from rural communities will be preferentially admitted and participate in a seven and one-half year undergraduate and graduate curriculum designed to give them the appropriate knowledge, attitudes, and skills to practice as rural family physicians.

For additional information contact: Joseph H. Levenstein, M.D., Professor and Head, Department of Family and Community Medicine, University of Illinois College of Medicine, 1601 Parkview Avenue, Rockford, Illinois 61107-1897.

ILLINOIS *continues on next page*

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL has enacted several initiatives that direct students' attention to the rewards of generalist medicine. First- and second-year medical students are able to meet with practicing generalist physicians through a series of evening seminars arranged in conjunction with the school's Alumni Association.

Beginning in September of 1993, first- and second-year students will have a continuous twice-a-week half-day course: Patient, Physician, and Society. This course will address the skills and knowledge needed to be a practicing physician. In the third year, there is a new one-month clerkship in primary care taught by faculty from family medicine, general medicine, and pediatrics. Currently in the planning stage is a continuity of care experience that will span the first three years.

For additional information contact: Harry N. Beaty, M.D., Dean, Northwestern University Medical School, Morton Building 4-656, 303 East Chicago Avenue, Chicago, Illinois 60611.

RUSH MEDICAL COLLEGE offers an alternative preclinical curriculum to 24 entering students each year. The first year residency choice of the alternative curriculum graduates tends to be higher in the generalist specialties. Of the 85 students having completed the alternative curriculum from 1988 through 1993, 45.8% have matched in family practice, internal medicine, pediatrics, or medicine/pediatrics. The alternative curriculum is a two-year preclinical, problem-solving curriculum. The students selecting this curriculum receive more exposure to clinical problems, assume personal responsibility for learning, and develop interpersonal skills.

Within the standard curriculum, introducing students to the concept of community health is central to the Preventive Medicine-Community Health course, which spans years one and two. Public health and community-based primary care programs are used as teaching sites to illustrate the concepts and techniques of community medicine. Among the activities offered by this course are field trips to Chicago area community health programs and home visits to patients.

The Rush Community Service Initiative Program, conceived by medical students and coordinated by the Department of Preventive Medicine, offers students the chance to learn while meeting the medical needs of underserved populations in the inner city. Many students in the alternative curriculum program have become leaders in the community service projects. Rush's community service program's contribution to primary care training is discussed further in *Hospitals* (March 20, 1993):56-57.

For additional information contact: Harold A. Paul, M.D., M.P.H., Project Director, Office of Alternative Curriculum, Rush Medical College, 600 South Paulina Street, Chicago, Illinois 60612.

Approximately one-half of **SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF MEDICINE** graduates enter primary care fields. Primary care plays a central role in all of the school's activities. To increase the number of doctors practicing in underserved areas, the school has always aimed recruitment efforts toward applicants from central and southern Illinois. Applicants are told that the school's focus is primary care.

The medical school curriculum features the integration of the basic and clinical sciences and provides early clinical experiences for students. The Introduction to Clinical Medicine course is offered in the first year and provides students the chance, under the supervision of family practitioners in southern Illinois, to begin to learn history-taking and

physical examination skills. Continuing into the second year, this course allows students to be matched with clinical preceptors, many of whom are primary care providers.

The Department of Family Practice clerkship offers a six-week rotation that allows students to spend five weeks with a family practitioner in central or southern Illinois. All of the clinical clerkships (which range from one to six weeks) make use of community preceptors for ambulatory rotations. Additional ambulatory experiences are available to students during the elective year.

Each year, the school hosts a Doctors Fair to link communities needing physicians with residents and students seeking a practice site. The hospitals and clinics offer incentives ranging from payment of medical school tuition and fees to the provision of housing while in practice.

For additional information contact: Linda H. Distlehorst, Ph.D., Assistant Dean/Curricular Affairs, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, Illinois 62794-9230.

INDIANA

INDIANA UNIVERSITY SCHOOL OF MEDICINE has made curriculum and institutional changes to enhance the education and development of generalists.

Starting in 1993-94, the Introduction to Medicine course traditionally offered in the second year will be expanded to accommodate both first- and second-year students. In the first year, the course will cover topics related to the patient-doctor relationship. Faculty members from the departments of family medicine, internal medicine, and pediatrics will be the group leaders for this course.

A one-month required third-year family medicine clerkship was initiated in 1991-92. Clerkship students are placed with practicing physicians throughout Indiana, many of whom are in rural areas. The third-year medicine clerkship consists of three separate four-week rotations including a four-week ambulatory care component. The two-month pediatric clerkship is designed to provide a generalist education.

The Department of Family Medicine was recently restructured. Changes include appointing Deborah Allen, M.D. as Chair.

The medical school recently appointed a Primary Care Initiative Task Force. The task force, chaired by the Associate Dean for Primary Care Education—whose position is newly established—is expected to recommend curricular and institutional changes that will enable the school to better meet the health care needs of the state and the nation.

For additional information contact: Walter J. Daly, M.D., Dean, Indiana University School of Medicine, FH 302, 1120 South Drive, Indianapolis, Indiana 46202-5114.

IOWA

In November 1992, the **UNIVERSITY OF IOWA COLLEGE OF MEDICINE** Executive Committee approved a new Primary Care Initiative Mission Statement as a sign of their commitment to encouraging students to select primary care careers. Currently, nearly 37% of the school's 1987 graduates have entered primary care specialties.

To meet the commitment expressed in the new mission statement, changes will be made in admission criteria, undergraduate curriculum, and graduate medical education.

The current admission policy that gives preference to qualified applicants who are Iowa residents, and which seeks applications from minority groups underrepresented in medicine, will be maintained. Outreach will be expanded to rural Iowa high school and college students to encourage their consideration of careers in primary medical care.

Medical students will receive enhanced exposure to primary care faculty and clinical care throughout the medical school experience. Community-based educational experiences will be expanded.

The college will work with the University of Iowa Hospitals and Clinics and other affiliated programs to strengthen their primary care residencies, including enhanced opportunities for community training.

Financial incentives will be offered to medical students who choose to practice in primary care specialties. Recruitment, development, and retention of faculty in the primary care disciplines will be increased. New resources will be sought to support faculty in the primary care disciplines. Continuing education programs to support Iowa physicians in rural and primary care practices will be developed.

For additional information contact: Richard P. Nelson, M.D., Associate Dean, 218 Medicine Administration Building, Iowa City, Iowa 52242-1101.

KANSAS

Medical students at the **UNIVERSITY OF KANSAS SCHOOL OF MEDICINE** are eligible for the Kansas Medical Student Loan Program. Established by the State Legislature, the loan provides payment of tuition and living expenses up to $1500 for each month the student is enrolled in school. Entering students are given priority. In return, the student agrees to enter a primary care field in the state upon graduation. The physician must practice one year for each year of loan received.

For additional information contact: Billie Jo Hamilton, The University of Kansas Medical Center, Student Financial Aid, 3901 Rainbow Boulevard, Kansas City, Kansas 66160-7192.

KENTUCKY

The **UNIVERSITY OF KENTUCKY COLLEGE OF MEDICINE** offers students educational opportunities featuring community-based ambulatory experiences. A new course, Introduction to Medical Practice, gives first-year students an opportunity to spend a week in a local physician's office. A required 12-week third-year primary care rotation takes places at the university's outpatient clinics and regional sites. One of the two required fourth-year rotations occurs in an Area Health Education Center (AHEC) location. The AHEC site is usually a community hospital or a physician's office in a small Kentucky community.

During 1989 and 1990, the internal medicine and family practice departments piloted accelerated residency programs that allow three fourth-year students to combine the fourth year of medical school with the first year of residency. This program is detailed more fully in *Family Medicine* 25(1993):107-110.

For additional information contact: Sue Fosson, University of Kentucky, College of Medicine, Office of Education, Room MN-104, University of Kentucky Medical Center, 800 Rose Street, Lexington, Kentucky 40536-0084.

The **UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE**, recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant, is enacting changes designed to increase the number of students entering generalist fields and to increase the number of physicians practicing in the disadvantaged urban and rural areas of Kentucky. In 1992, the percentage of the medical school's graduates selecting generalist careers fell below 20% for the first time.

Several programs at the university and the medical school are directed toward increasing the number of generalists. 1) The Professional Education Preparation Program (PEPP) enables promising high school students from 84 rural counties to attend a six-week enrichment program during the summer before their freshman year of college. 2) The Kentucky Academy of Physicians and the Department of Family Practice collaborated in developing the Adopt-A-Student program. This program places interested students with family physicians throughout Kentucky for an eight-week externship during the summer between the first and second year of medical school. 3) Offered as an elective, the Physicians Preceptor Program allows first- and second-year students to establish a one-on-one mentor relationship with a physician preceptor. In recent years, approximately one-half of each medical class has enrolled in this elective. 4) Second-year students can take the Medical Education and Community Orientation elective to gain more experience with community oriented primary care. 5) The Kentucky Area Health Education Centers (AHEC) provides students with clinical rotations in family practice, internal medicine, and general surgery, at locations away from the medical center. 6) The school offers a combined internal medicine pediatrics residency program.

The school's specific goal is to have one-third of each class become generalists. To meet this goal, new interventions are being developed in the areas of recruitment, admission policies, undergraduate curriculum, residency training, and practice entry.

PROPOSED:

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ Increasing the size of the Professional Education Preparation Program (PEPP) to 75 in the prefreshman summer session and adding a generalist emphasis.

KENTUCKY *continues on next page*

- ❑ Expanding tours and programs for high school and college students to include more interaction with students, faculty, and residents in the primary care departments.
- ❑ Continuing to expand the health careers awareness and promotion activities of Kentucky AHECs with added emphasis on the regional colleges and universities, especially those with strong premedical programs.
- ❑ Developing long-term financial scholarship/loan programs, beginning in the PEPP years and extending into the practice years.
- ❑ Creating a generalist admission subcommittee charged with admitting 40 students into a generalist track and increasing the generalist representation on the overall admission committee, in order to insure that more applicants who are likely to be generalists will be accepted.

PROPOSED:

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Initiating a generalist curricular track focusing on providing continuous exposure of selected students to generalist and primary care medicine throughout the medical curriculum.
- ❑ Developing a series of electives targeted to first- and second-year students in the generalist track. Each student in the track will spend time in primary care activities on a regular basis during the first two years. These experiences will rotate among family practice, internal medicine, and pediatrics.
- ❑ Forty students selected for the generalist track will have a significantly modified curriculum in the third year. Ten students will spend the third year at an off-campus training site: the Trover Clinic in Madisonville, Kentucky. The remaining 30 students will spend the year at various sites in or near the school of medicine. The required clerkships in medicine, family practice, and pediatrics will be ambulatory and generalist in nature.
- ❑ The fourth year will consist of four-week required clerkships in surgery and medicine and a variety of ambulatory, primary care electives developed specifically for the generalist track.

PROPOSED:

RESIDENCY TRAINING INITIATIVES:

- ❑ Negotiations are underway for family practice residents to become affiliated with a major health maintenance organization or other health care facility to improve the patient mix.
- ❑ The Department of Internal Medicine is committed to providing increased experiences in ambulatory medicine at a variety of sites for all residents.
- ❑ A special pediatric primary care track will be developed to train 12 pediatric residents (four residents in each of the three years of training). An inpatient generalist ward rotation will be created, with the resident spending two months per year on this ward.
- ❑ The combined medicine/pediatrics residency program will be expanded from four positions to six positions each year.
- ❑ Four primary care centers in the urban area, which together comprise the Louisville/Jefferson County Primary Care Association, will serve as sites for rotations for all the generalist residencies.

PROPOSED:

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ The Trover Clinic, which has seven satellite sites in rural western Kentucky, and the University of Louisville will study and devise a method of rewarding generalists differentially.

- The Trover Clinic will also establish additional practice sites and enlarge existing ones to accommodate graduates of residencies in family practice, internal medicine, pediatrics, and medicine/pediatrics.

For additional information contact: Jeffrey D. Johnson, Special Assistant to the Vice Dean, Project Director, University of Louisville School of Medicine Generalist Physician Initiative, University of Louisville, Louisville, Kentucky 40292.

LOUISIANA

The LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE—NEW ORLEANS recently instituted Primary Care 120, a four-week elective course available between the freshman and sophomore years. The elective provides students a chance to observe and experience community-based primary medical care with rural preceptor physicians.

A six-week required course in family medicine for all third-year students began in 1992 with preceptorship rotations to rural and inner-city family medicine practitioners. Primary care physicians are being trained in combined programs such as medicine/pediatrics and medicine/emergency medicine.

For additional information contact: Warren C. Plauche, M.D., Executive Associate Dean for Clinical Affairs, Louisiana State University School of Medicine in New Orleans, 1542 Tulane Avenue, New Orleans, Louisiana 70112-2822.

The LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE - SHREVEPORT Area Health Education Center Program (LSUMC-S/EA) sponsors the Rural Preceptorship Program, a hands-on, primary care experience designed to introduce medical students to the demands and rewards of practicing primary medicine in rural and underserved areas. The program offers a four-week elective preceptorship to introduce second- and third-year students to primary care physicians working in rural settings across the state. Students observe the professional, business, and community life of rural physicians. The program requires a 40-hour per-week commitment plus on-call duties.

The AHEC also sponsors two senior electives. One provides four- and two-week preceptorships with primary care physicians in rural settings; the second provides four- and two-week preceptorships at LSUMC-S/EA Conway Division Hospital in Monroe, an inner-city underserved area.

The Department of Medicine is committed to encouraging residents to enter general internal medicine. A general medicine track is being offered in PGY-2. The track emphasizes outpatient care and offers experience with practicing internists at community medical centers.

Starting in 1993, a fellowship in general internal medicine will be available at the end of the PGY-3. The fellowship provides additional training in medical procedures of practical value to the primary care physician. Practicing internists who have completed their training, as well as current residency program members, may apply for the fellowship that can range from three months up to one year.

The medical school is joining with Willis Knighton and Schumpert Medical Centers to form a Family Practice Training Network to provide expanded clinical training opportunities

LOUISIANA *continues on next page*

for students. The purpose of the program is to recruit and educate family physicians and other primary care providers to function in diverse community settings. The network offers a setting for clinical research into the application of new diagnostic and treatment methods. First- and second-year medical students can participate in AHEC programs at the two medical centers. Fourth-year students can select internships and residents receive an enriched curriculum through this new resource. Medical school faculty and practitioners can use the facilities to update their skills and earn continuing medical education credit.

For additional information contact: F. Scott Kennedy, Ph.D., Assistant Dean for Student Admissions, School of Medicine in Shreveport, Louisiana State University Medical Center, 1501 Kings Highway, Post Office Box 33932, Shreveport, Louisiana 71130-3932.

MARYLAND

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE students who are Maryland residents and who choose family practice are eligible to receive up to $7500 per year, beginning in the second year of medical school, from the Maryland State Scholarship Administration. Students accepting the scholarships agree to practice in an underserved Maryland area. The scholarship must be repaid in full if the recipient does not practice for three years in a manpower shortage area.

For additional information contact: Jack Nealon, Financial Aid Advisor, University of Maryland, 621 W. Lombard Street, Room 330, Baltimore, Maryland 21201.

The UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES was founded to educate physicians for the uniformed services. The curriculum offers a broad general background with special emphasis on military, global, and emergency medicine. Required courses and clerkships in the third and fourth years emphasize primary health care experiences.

The third-year, six-week family practice clerkship is divided between the ambulatory clinic, hospital, and on-call sites. Staff and resident members of the family practice team serve as preceptors for the clerkship, thereby allowing students to provide supervised medical care. During the 12-week internal medicine clerkship, students spend 6 weeks on the general medicine service at two teaching hospitals. An ambulatory rotation is also available. Three weeks of the pediatric clerkship are allotted for well-baby care and routine outpatient child health care. The other three-week block is devoted to the care of hospitalized children.

An eight-week subinternship experience, which can include family practice, internal medicine, pediatrics, or general surgery, is offered to fourth-year students. Other fourth-year elective courses include: Military Contingency Medicine, Military Emergency Medicine, and Military Preventive Medicine.

For additional information contact: Nancy E. Gary, M.D., Dean, Uniformed Services University of the Health Sciences, F. Edward Hébert School of Medicine, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799.

MASSACHUSETTS

In the last five years (1987-1992), 43% of the graduating class of **BOSTON UNIVERSITY SCHOOL OF MEDICINE (BUSM)** have matched into family medicine, internal medicine, or pediatrics through the National Resident Matching Program. However, many of the students selecting internal medicine and pediatrics have subsequently chosen subspecialty training.

Over the past several years, approximately 50% of the medical students accepted have entered through the premedical pathway programs available with Boston University, thus allowing the medical school to intervene early in the educational process. The Accelerated Liberal Arts/Medical Education Combined Degree Program offers two options for integrating the undergraduate and medical school curricula. The Modular Medical Integrated Curriculum is a six-year curriculum, and the MMEDIC Program is a seven-year curriculum. Students accepted into these programs at Boston University are provisionally accepted to the school of medicine.

BUSM redesigned the undergraduate medical curriculum in the fall of 1991. Several important components of the change are related to generalist physician initiatives including: 1) incorporation of primary care into the core medical school curriculum; 2) establishment of a longitudinal course, Introduction to Clinical Medicine, which is offered throughout the first three years, and is based in community health centers, offices of family physicians and other primary care practice sites; 3) establishment of Integrated Problems, a two-year course in which primary care physicians teach small-group sessions; 4) enlargement of the Cooperative Mentorship Program, which was developed by Boston University, its Area Health Education Center (AHEC), and the Massachusetts Academy of Family Physicians in 1991. The program places about 40 first- and second-year medical students in the offices of family physicians for one afternoon per week; and 5) introduction of primary care rotations in the third and fourth years that are based in various community practice settings.

As part of the Center for Community Health Education, Research, and Service, (Kellogg-CCHERS) the medical school is participating in an effort to initiate curriculum reform in nursing and medicine by redirecting the process toward community-based educational opportunities. Approximately 25% of the school of medicine's four-year curriculum will be devoted to an integrated, continuous experience in community health centers.

In partnership with BUSM, the Malden Hospital is establishing a residency training program in family medicine. This program is the only residency in family medicine in the Boston area.

As the recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant, Boston University School of Medicine plans to implement the following changes to achieve the goal of having 50% of BUSM students entering generalist careers by the year 2000.

PROPOSED

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ A generalist introduction to medicine will be presented to students enrolled in two affiliated high school enrichment programs.
- ❑ Medical humanities and social science courses along with primary care seminars and community hospital experiences will be offered to premedical students at BU, 50% of whom have early admission to BUSM.
- ❑ Generalist physician admission criteria will be developed and more community-based generalist physicians will be included on the admission committee.

MASSACHUSETTS *continues on next page*

PROPOSED:

RESIDENCY TRAINING INTIIATIVES:

- ❑ Patient care services on the general medical and pediatrics wards at Boston City Hospital will be reorganized into community firms that are closely linked with community, managed care programs, health centers, and private practices.

PROPOSED:

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Physician recruitment and retention efforts will be enhanced by joint programs that provide professional enrichment through academic, AHEC, or other support programs.
- ❑ A coalition of knowledgeable individuals in health care financing, patient care service, and community development, is working to develop a program that will pay the medical education costs of future generalist physicians.

For additional information contact: John F. McCahan, M.D., Associate Dean for Academic Affairs, Boston University School of Medicine, 80 East Concord Street, Boston, Massachusetts 02118.

HARVARD MEDICAL SCHOOL has recently enacted a number of institutional changes that address primary care issues. Thomas Inui, M.D. has been appointed to the Chair of the Division of Primary Care. A Department of Ambulatory Care and Prevention has been established through the combined efforts of the Harvard Community Health Plan and the Harvard Medical School. During 1993, the school organized a club for medical students interested in primary care.

Within the standard curriculum all students take a two-month ambulatory clerkship with a focus on primary care. The experience is offered at a health maintenance organization, neighborhood health centers, primary care clinics of teaching hospitals, and individual physicians' offices.

The number of positions in the primary care residency programs have been increased. A debt reduction program for students who express an interest in selecting generalist careers is being developed.

For additional information contact: Daniel D. Federman, M.D., Dean for Medical Education, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115

Within its standard curriculum, the **UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL** offers community-based primary care experiences for students. A three-week community medicine clerkship is required of all students in the first year as is a longitudinal preceptorship program that provides experience with a community-based physician one afternoon per month.

All third-year students are required to take a six-week family medicine core clerkship in an office-based or community health center practice. Three weeks of the six-week pediatric core clerkship is taken in a pediatric office or in a community health center. A maternal and child health third-year clerkship was initiated in 1991-92. This clerkship combines the required six-week pediatric and six-week obstetrics/gynecology clerkship into one integrated twelve-week clerkship.

The University of Massachusetts Medical Center (UMMC) family medicine residencies include 48 residents and are currently the only programs in the state graduating

family medicine residents. The pediatric residency has 21 residents and all are assigned to community-based sites. The internal medicine residency program has 63 residents.

The UMMC recently received a Robert Wood Johnson Foundation Generalist Physician Initiatives Grant. The grant will be used to implement changes designed to increase the number of undergraduate students ultimately selecting generalist careers to a minimum of 50% of the graduating class and to increase the number of residency positions in primary care by 25%. An overview of a few of the proposed initiatives follows.

During the admission process, students will be asked to specify the type of medical practice and the type of geographical setting they desire. The admission committee will strongly consider the likelihood of a student becoming a generalist physician when selecting applicants. By increasing outreach efforts to underrepresented populations, including minorities and rural residents, the school hopes to increase the number of entering students with a predisposition to primary care. The makeup of the admission committee will be changed to increase the representation of generalists and will include at least one family practitioner, one general internist, and one general pediatrician.

The school's longitudinal preceptorship program will be expanded to include second-year students and will be increased in total time required during the first two years of the curriculum. The school plans to have more integration between the clinical and basic science components of the curriculum. Generalist physicians will be more actively involved in teaching within the medical school.

The third-year internal medicine clerkship will be revised to include a required four-week ambulatory rotation in a primary care setting as well as a four-week community hospital experience. In addition, a new four-week interdisciplinary ambulatory clerkship will be developed. New primary care curriculum initiatives will require an increase in the number of primary care settings available to students. These will include community health centers, managed care facilities, and private offices.

The total number of residents entering generalist practice will increase by 25% over a period of six years. This will be accomplished by increasing the total number of positions in family medicine, medicine, and pediatrics and by increasing the percentage of current residents who enter generalist careers, particularly in medicine. The latter is being achieved by doubling the amount of time residents spend in ambulatory, continuity clinics and by increasing the utilization of community-based sites for such rotations.

The UMMC Learning Contract now allows students to defer payment of two-thirds of their annual tuition. Repayment of the deferred amount is forgiven for graduates who practice in a primary care specialty for two years and within Massachusetts, practice in an underserved area in any specialty, or provide public or community service. The learning contract is signed by 95% of UMMC students upon entering the school.

For additional information contact: Michael Huppert, M.P.H., Executive Director, Area Health Education Center, Associate Dean for Community Programs, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, Massachusetts 01655.

TUFTS UNIVERSITY SCHOOL OF MEDICINE offers a combined M.D./M.P.H. program based within the Department of Community Health. The program provides 15 students from each entering class with combined medical-public health training that features the integration of public health skills and perspectives into medical practice. The majority of graduates from this program are selecting primary care careers. For additional information about the Tufts' program see *Academic Medicine* 67(1992):363-365.

MASSACHUSETTS *continues on next page*

The school of medicine has been awarded a Robert Wood Johnson Foundation Generalist Physician Initiative Grant. The grant will be used to underwrite changes in the school's admission criteria, undergraduate curriculum, residency training, and practice entry support programs.

The overall admission criteria are being revised to increase the number of generalist-oriented applicants.

Undergraduate curriculum changes will include increasing the amount of ambulatory-based training for all Tufts students. Students with a declared interest in generalist careers will receive extensive ambulatory-based training. A Community Physician Educator Program to teach medical students outside the hospital will be developed.

Family practice residencies will be established and the number of primary care residencies increased.

Practice entry support initiatives include: 1) assisting residents with practice start-up and management; 2) assisting with medical school debt repayment; 3) identifying new generalist physician mentors; and 4) providing other support services for generalist physicians beginning new practices.

For additional information contact: Mark Linzer, M.D., Project Director, Robert Wood Johnson Generalist Physician Initiative Program, Tufts University School of Medicine, Dean's Office, 136 Harrison Avenue, Boston, Massachusetts 02111-1800.

MICHIGAN

The **MICHIGAN STATE UNIVERSITY COLLEGE OF HUMAN MEDICINE** has as its mission the education of primary care physicians. Almost 40% of the college's 1987 graduates have chosen generalist practices. The college presents itself to applicants as a school that seeks to graduate primary care physicians. Training takes place in medium-sized community health care systems where generalists play prominent roles. More recently, the curriculum has undergone changes to enhance students' exposure to primary care.

In 1991, the college initiated the first year of its new, four-year curriculum. A commitment to the doctor-patient relationship, emphasis on basic clinical skills, and a preventive orientation are all part of a continuous, two-year Clinical Skills Program. The Mentor Program, a new seminar sequence expanding across the preclinical curriculum, introduces students early on to the role of caring for patients. Primary care physicians serve as mentors for this sequence. The second year is a problem-based learning experience for all students where basic science is taught in a clinical context.

All students now take a required eight-week family practice clerkship. Additionally, all students will rotate through the three primary care clerkships and then enter the specialty clerkships. This linked multidisciplinary curriculum features continuing, comprehensive patient care and emphasizes the generalist's approach to several common conditions or problems.

Following completion of the required clerkships, students will return to the primary care setting for four weeks in the fourth year for the Capstone experience. This experience focuses on the concept of the community as a unit of analysis for the primary care physician. Students develop techniques and skills to explore health problems within communities utilizing the resources of other health providers and institutions.

A new initiative supported by the W. K. Kellogg Foundation through the Community Partnership award is a joint effort between the Michigan State University College of Human Medicine, College of Osteopathic Medicine, and College of Nursing to expand the colleges' community network system through the establishment of interdisciplinary primary health care systems. These centers will offer a full range of academic programs and serve as primary

education sites, exposing students to strengthened systems of community participation and to multiprofessional health care delivery. At the residency level, beginning experimental programs with linkages between the undergraduate and graduate programs are being proposed. The basic model combines the last year of medical school training with two years of a primary care residency. Such a program in internal medicine has been proposed and is expected to be approved. A similar initiative is being developed in family practice.

For additional information contact: Yasmin Richmond, Administrative Director, Michigan State University College of Human Medicine, A-110 East Fee Hall, East Lansing, Michigan 48824.

In August 1992, the **UNIVERSITY OF MICHIGAN MEDICAL SCHOOL** implemented the first year of a new curriculum. Implementation of the second, third, and fourth years will occur in July and August 1993.

The new curriculum changes include the addition of Introduction to the Patient, a course designed to introduce first- and second-year students to the environment of medicine and to prepare them to interview patients and to conduct physical examinations. Students receive these experiences in primary care and geriatric settings.

Each third-year student is required to participate in an experience in primary care medicine. This may be either a four-week block or a half-year (one half-day each week for 24 weeks) longitudinal experience. In addition to the primary care requirement, third-year students complete the required clinical clerkships. Required outpatient rotations have been added to these clerkships.

The fourth year provides students with expanded opportunities for clinical electives both on and off campus. Requirements include an advanced basic science experience, an intensive care unit experience, and a subinternship in which students assume major responsibility for patient care.

For additional information contact: Casey White, Office of Medical Education, Office of the Dean, M7300 Medical Science Building I, 1301 Catherine, Ann Arbor, Michigan 48109-0624.

The **WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE** admission committee uses affirmative action to attract underrepresented minorities, including students from rural areas. The Department of Family Medicine has piloted Clinical Correlations, an educational program that introduces students to general practice early on by placing them in community practice sites. All medical students participate in this program twice weekly during their first and second year. This program will become a part of the regular undergraduate curriculum in the 1993-94 academic year. Family medicine also sponsors a long-standing state-wide clerkship for all junior students. The clerkship pairs students with rural and urban practitioners for a one-month rotation.

General internal medicine has a mandatory one-month ambulatory rotation for junior students. The students learn about outpatient internal medicine practice and the basic principles of health promotion, disease prevention, care of the chronically ill, patient education, and substance abuse. This rotation is being moved to the senior year in 1994 and will include more office-based practice sites. Representatives from the generalist departments are working to establish combined ambulatory rotations for senior medical students.

For additional information contact: Robert R. Frank, M.D., Associate Dean for Students, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201.

MINNESOTA

The patient-based curriculum of **MAYO MEDICAL SCHOOL** permits extensive student/patient interaction after completion of the first year and integrates the basic sciences into all segments of the curriculum.

First-year required courses offering generalist experiences are Introduction to the Patient and Continuity of Care. Second-year students have several required clerkships including: 1) a two-week family medicine didactic preceptorship; 2) a nine-week internal medicine clerkship; and 3) a six-week pediatric clerkship. These same clerkships, with a variance in the amount of time spent, are required in the third year. Fourth-year students are offered clerkship electives in family practice, internal medicine, and pediatrics. A six-week subinternship in internal medicine is required. A Primary Care Interest Group and a Pediatrics Interest Group each hold monthly meetings for students and faculty.

In March 1993, the Task Force on Generalist Physician Education at Mayo was formed to develop and implement generalist physician activities.

For additional information contact: Burton A. Sandok, M.D., Dean, Mayo Medical School, 200 First Street, S.W., Rochester, Minnesota 55905.

The principal clinical emphasis of the two-year program at the **UNIVERSITY OF MINNESOTA-DULUTH SCHOOL OF MEDICINE** is on family medicine and its interrelationships with other medical specialties. Since the campus' inception in 1972, 50% of the students who completed the two-year program and went on to graduate from the Minneapolis campus are practicing family medicine.

The admission committee strongly favors candidates whose personal and background traits indicate a high potential for becoming a family physician in a small town, rural setting.

During their two years at the campus, students participate in the family practice preceptorship program. First-year students are assigned to a family practitioner and learn medicine as practiced in its actual setting. During the second year of the preceptorship, students work with physicians who practice in non-urban areas of northern Minnesota and Wisconsin.

For additional information contact: Richard J. Ziegler, Ph.D., Assistant Dean for Admissions, or James Boulger, Ph.D., Director, Preceptorship Program, University of Minnesota-Duluth School of Medicine, 10 University Drive, Duluth, Minnesota 55812.

To address the shortage of primary care physicians practicing in rural Minnesota areas, the **UNIVERSITY OF MINNESOTA MEDICAL SCHOOL** initiated the Rural Physician Associate Program (RPAP) in 1971. Of 506 former RPAP students now in practice, 52% are practicing in rural communities, 66% are in family practice, 16% are in other primary care specialties, and 62% remain in Minnesota.

RPAP is an elective open to third-year students. The student lives, learns, and works in a rural community for nine months. This type of longitudinal continuity of care experience is unavailable elsewhere in the medical school curriculum. Students participating in RPAP receive a scholarship of $13,000 ($9,000 provided by the state and $4,000 by the clinic or hospital).

Since 1987 the Medical School has offered a required six-week ambulatory medicine clerkship for senior students. The clerkship requires that students spend three days per week

of supervised patient care experience in a community-based (63 sites) or hospital-based (12 sites) ambulatory clinic in one of four disciplines—family practice, internal medicine, pediatrics, or geriatrics. The students develop skills that allow them to evaluate, manage, and coordinate health care for the wide variety of problems seen in the ambulatory setting. A recent study, (*Academic Medicine* 66[1991]:511-512), reports on the students' impressions of the integrated ambulatory care clerkship.

For additional information contact: Walter Swentko, M.D., Interim Director, RPAP, or Robert B. Howe, M.D., UMHC, 420 Delaware Street, Minneapolis, Minnesota 55455.

MISSISSIPPI

Since 1981, 24% of the **UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE** graduates have chosen family practice residencies. The school credits this success to the third-year required family medicine preceptorship. The preceptorship is based in the office of a family physician in private practice within the state. It is designed to teach the concepts and practice of continuous and comprehensive family-centered health care. A fourth-year family medicine preceptorship and a family medicine clerkship are also available.

Since 1972, the Mississippi Medical Center has offered a residency program in family practice. One hundred and fifty-eight residents have completed the program, and 125 practice in Mississippi. More than half of the graduates practice in towns with populations of less than 25,000.

The University of Mississippi Medical Center offers financial support through the Mississippi State Medical Educational Scholarship Loan Program. This program was established by the legislature for Mississippi medical students who plan to pursue postgraduate education in family medicine, internal medicine, pediatrics, or obstetrics/gynecology. The loan provides tuition for four years of medical school in return for a commitment to practice in a physician shortage area in Mississippi—one year of practice is required for each year of scholarship received.

For additional information contact: Norman C. Nelson, M.D., Vice Chancellor for Health Affairs, Dean, School of Medicine, The University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4505.

MISSOURI

For 30 years, the **UNIVERSITY OF MISSOURI-COLUMBIA SCHOOL OF MEDICINE** has required all medical students to spend a four-week period with a family physician in a rural or small town. Students participate in the family medicine preceptorship in either their third or fourth year of medical school. Approximately 200 family physicians in Missouri, 20 in other states, and 10 in foreign countries participate in the preceptorship program. Students are housed in homes of the preceptors, in apartments provided by the local hospital, or in the hospital itself.

MISSOURI *continues on next page*

In July 1992, the school of medicine, in conjunction with the University Hospitals and Clinics, began an integrated residency program. This program offers an enhanced and individualized four-year residency for students entering selected primary care specialties as well as financial assistance during the fourth year of medical school.

Participants in the program are referred to as "externs." They participate in patient care as subinterns for 20 weeks. Depending upon schedules developed by departmental faculty, subinterns spend their time in the outpatient clinic, on inpatient units, and in intensive care units. The school currently has two senior students in the integrated family practice program and two in the integrated pediatrics program.

The University of Missouri-Columbia Hospital and Clinics is providing funding for forgivable loans ($6000 per semester) to the integrated residency students who do their primary care residency at the University Hospital and Clinics. The purpose is to reduce the total indebtedness of students selecting a primary care specialty.

For additional information contact: Ted Groshong, M.D., Associate Dean for Medical Education, University of Missouri-Columbia School of Medicine, MA202 Medical Science Building, Columbia, Missouri 65212.

The **UNIVERSITY OF MISSOURI-KANSAS CITY SCHOOL OF MEDICINE (UMKC)** offers a six-year combined B.A. M.D. program. This program allows students to experience patient care opportunities early on in the curriculum. A fundamental concept at UMKC is the docent system. Docents fulfill many roles for students including role-model, curriculum advisor, career counselor, and teacher.

Introduction to Medicine I, offered for five hours per week in year one, allows students, in groups of nine, to meet with their first year docent at affiliated community hospitals. Along with the docent, students interview patients and learn to address the effects of illness on the patient, family, and community. After year one, students receive a work-study appointment at an assigned community hospital. This allows students to develop a better understanding of the roles of care providers and of the community hospital in providing care.

During years three through six, students become part of a Docent Unit that consists of 12 students and is lead by an internal medicine physician. As part of this unit, students spend one half-day per week working with the Clinical Assignment—Outpatient Department at Truman Medical Center's ambulatory and continuous care service operating out of four general medicine clinics. Each student is assigned a panel of patients to follow. This longitudinal experience provides students a chance to develop a continuous student-physician-patient relationship.

The Family Practice Preceptorship Program offers fourth-year students an opportunity to spend one month with a board-certified family physician practicing medicine in a rural Missouri setting. Students learn about an array of societal and health care concerns unique to a non-urban primary care setting in this program. In addition to the required preceptorship, students may also take elective family medicine rotations.

For additional information contact: Rose Cwerenz, M.D., Office of Educational Resources, UMKC-School of Medicine, 2411 Holmes Street, Kansas City, Missouri 64108.

The **WASHINGTON UNIVERSITY SCHOOL OF MEDICINE** has implemented new policies and programs aimed at expanding the educational opportunities for students in community-based settings.

Efforts to increase the number of generalist physicians are centering on the recruitment and retention of women, whom studies indicate may go into primary care practice at a higher rate than men. During 1990, the school established an Office of Women in Science and Medicine to foster the educational and social experience of all women at the medical center. The school has also increased merit-based scholarship support for women. Of the 122 currently accepted matriculants for the class of 1996, 47% are women, a substantial increase from previous years.

Curriculum experiences have been revised to expose students to community issues. A first-year required course, Medicine in Modern Society, introduces students to the challenges of providing health care to underprivileged children. The students work with generalist physicians at the county department of health and the Missouri Medicaid program. During the 1992-93 academic year the school piloted the Health Protection Training Program for 10 first-year students. This longitudinal program allows students to learn interviewing, history-taking, and diagnosis skills by following assigned patients throughout the four years of medical school. Students participating in this program work with a physician at the city/county health care facility.

Additional student-directed, extra-curricular educational programs are available. Approximately 90 first- and second-year medical students participate in the Students Teaching AIDS to Students program. Through this program medical students provide primary educational interventions to students at six community middle schools. A Perinatal Project provides first- and second-year students with opportunities to participate in educational interventions for pregnant women at People's Health Centers, a federally funded facility in St. Louis. Students are matched with pregnant adolescents, follow them throughout the pregnancy, and follow the infants and mothers after birth.

During 1991, the Department of Pediatrics launched the Community Outpatient Practice Experience (COPE) program. COPE provides a shift from the hospital-based continuity clinic program to a community-based model. Each resident in the program is matched one-to-one with a preceptor in the community, with the objective of incorporating the resident into the practice as a junior partner for the duration of residency training. An ambulatory care rotation is offered to second- and third-year pediatric residents. The rotation concentrates on key outpatient areas that are important to generalists. In 1990, the PEDNET system was established as a pilot project to develop an electronic link between the Department of Pediatrics, Washington University Medical School, St. Louis Children's Hospital, and generalists practicing in the community. Thirty participating community physicians are able to retrieve and communicate medical information through PEDNET.

The Department of Internal Medicine's residency training program is based on a primary-care model. All resident services manage patients with a broad spectrum of chronic and acute medical problems. Residents who want to receive an additional year of general medicine in an academic setting can participate in the "Gold Service". Residents who elect this program provide inpatient services for an additional year after completing training and before entering practice. In addition, a Division of General Internal Medicine, with an endowed chair, has been established by the Department of Internal Medicine.

The Washington University Internal Medicine Club was formed in 1991. The club facilitates informal interaction between students and internal medicine faculty and physicians.

Faculty members at the school have collaborated with the state government to develop proposals for financial incentives to increase the supply of students who enter generalist residency programs and to develop incentives for physicians who locate in underserved areas in the state.

For additional information contact: Mabel L. Purkerson, M.D., Associate Dean for Curriculum, Washington University School of Medicine at Washington University Medical Center, Campus Box 8077, 660 S. Euclid Avenue, St. Louis, Missouri 63110-1093.

NEBRASKA

CREIGHTON UNIVERSITY SCHOOL OF MEDICINE has recently reorganized components of its curriculum to increase student interaction with primary care disciplines.

The clinical component now includes a required four-week core clerkship in family medicine, administered by the Department of Family Practice. The majority of the clinical sites are the offices of community-based primary care physicians.

All senior students must take a four-week required ambulatory care selective offered by family practice, internal medicine, or pediatrics. Since this program's inception in 1989, the majority of students have selected family practice.

A pilot program combining the fourth year of medical school with the first year of family practice residency at Creighton University Medical Center is in its second year and supports two positions.

For additional information contact: William J. Hunter, M.D., Associate Dean for Academic Affairs, Creighton University School of Medicine, 2500 California Plaza, Omaha, Nebraska 68178.

The UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE has a commitment to providing physicians for underserved rural areas. To meet this commitment, applicants from counties with total populations of under 24,000 and underrepresented minority applicants receive particular attention. To recruit rural students, the Rural Health Opportunities Program enables freshman from Chadron State College and Wayne State College to be eligible for early admission to the college of medicine.

Through the college's new integrated curriculum, students are offered an Integrated Clinical Experience two afternoons per week throughout the four years. This experience will cover physical examination, interview skills, preventive medicine, and other topics relative to the practice of medicine.

An eight-week community preceptorship is a senior requirement. The clerkship is offered at a variety of community sites in either solo, dual, or group family practice settings.

In 1989, the school initiated an interdisciplinary, four-year primary care program that begins in the senior year of medical school and continues through the students' residency training, sponsored jointly by the departments of internal medicine and family medicine. Students begin the primary care program in their senior year and spend two years in a common pathway before choosing either a family medicine or an internal medicine residency. Students in the program receive both a tuition waiver for their senior year and a loan for living expenses during that year. The waiver must be repaid if they fail to complete the four-year program and practice for two years in an underserved Nebraska community. For more information about this program see (*Academic Medicine* 67[1992]:88-89).

For additional information contact: Layton F. Rikkers, M.D., Interim Dean, University of Nebraska College of Medicine, 600 South 42nd Street, Omaha, Nebraska 68198.

NEVADA

Approximately 44% (260) of the **UNIVERSITY OF NEVADA SCHOOL OF MEDICINE**'s graduates from the past 13 years are practicing in primary care specialties. The school has a track record of giving prominence to primary care.

The undergraduate curriculum includes several primary care experiences for students. 1) A four-week primary care preceptorship is offered to students between their first and second year. More than 75% of the school's students have completed this preceptorship. 2) A mandatory third-year family medicine clerkship requires students to spend half of their clerkship time with a family physician in the community. 3) All students are required to take a four-week rotation in a family physician's office in rural Nevada.

During the third year of the family medicine residency program, a four-week rural rotation is required. The rotation provides residents an opportunity to work with a rural generalist physician. The internal medicine residency programs are located in both Reno and Las Vegas and are designed to train residents for general internal medicine.

A Division of Continuing Medical Education has been established to improve the practice environment by providing programs for primary care physicians in Nevada and to develop programs to meet the needs of the medical staff at affiliated rural hospitals. Primary care physicians who serve as preceptors are provided with continuing education and receive frequent faculty contact to assure that they have access to the resources needed to provide successful education experiences for the students.

Other support programs that encourage generalist careers are offered by the Center for Education and Health Services Outreach and the Nevada Area Health Education Centers Program.

For additional information contact: Patricia A. Gerken, M.P.H., Coordinator, The Generalist Initiative, University of Nevada School of Medicine, Reno, Nevada 89557-0046.

NEW HAMPSHIRE

As New Hampshire's only medical school, part of the mission of **DARTMOUTH MEDICAL SCHOOL** is to increase the availability of primary care doctors for the people of the state. Since 1989, the percentage of Dartmouth Medical School graduates who have completed internal medicine residencies and gone on to practice generalist careers has varied from 50% to 20%. A survey of former pediatric residents that attended Dartmouth (33 graduates from 1982 through 1989) found that over 60% are currently practicing general pediatrics. During the past four years Dartmouth has been working on curriculum innovations to strengthen its primary care program.

Early on in the curriculum students engage in problem-based learning of the social sciences and humanities. Clinical Symposia is a required first-year course that includes substantial primary care content. In the first weeks of class students are introduced to patients and their primary care physicians.

Required clerkships in pediatrics, medical center-based ambulatory care, and community-based family medicine have recently been expanded to include 12 weeks of primary care experiences. Third-year students are required to take a seven-week primary care clerkship. The clerkship experience occurs primarily at six community sites.

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Students have opportunities to be taught by primary care doctors. Practitioners from the Dartmouth-Hitchcock Medical Center contribute to clinical symposia, the family medicine longitudinal elective, the physical diagnosis course and clerkships in ambulatory medicine, primary care, pediatrics, and obstetrics/gynecology.

In January 1990, the Community Health Center, a multidisciplinary primary care clinic opened. Clinicians in family practice, general internal medicine, and pediatrics share patients and staff and teach students and residents as partners.

As the recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant the school has set the following goals to help increase the number of students choosing generalist careers.

PROPOSED:

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ Add representatives from primary care pediatrics and family medicine to the admission committee.
- ❑ Create the Dartmouth Summer Institute for Primary Care to interest college students in primary care.

PROPOSED:

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Design a Primary Care Curriculum to offer electives.
- ❑ Design a Primary Care Pathway to offer required courses for selected students.

PROPOSED:

RESIDENCY TRAINING INITIATIVES:

- ❑ Plan a primary care track in internal medicine.
- ❑ Integrate elements of the curricula of the pediatric and internal medicine residencies and the proposed family medicine and obstetric and gynecology residencies.

PROPOSED:

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Develop, in collaboration with the New Hampshire state government, a loan-forgiveness program for physicians who establish primary care practices in the state.

For additional information contact: Andrew Wallace, M.D., Vice President for Health Affairs, Senior Vice President for Academic Affairs and Dean, Dartmouth Medical School, College Street, Hanover, New Hampshire 03755.

NEW JERSEY

The **UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY-ROBERT WOOD JOHNSON MEDICAL SCHOOL (RWJMS)** has a flexible curriculum that allows students to schedule classes around other obligations such as part-time employment or family responsibilities. The school hopes this flexibility will attract more students who are predisposed to select primary care careers.

To increase awareness of the importance of primary care, the first-year student orientation is being formalized to include sessions on social issues and career options. The school is currently in the process of revising the first- and second-year curriculum to include the introduction of a longitudinal patient care experience at the start of the first year.

A new third- and fourth-year curriculum, designed to increase students' participation in primary care, will be implemented in July of 1993. As part of the new curriculum, students will have required third-year clerkships in family medicine, internal medicine, pediatrics, surgery, psychiatry, and obstetrics/gynecology. The clerkships will last for eight weeks. One-half of the scheduled time in the third year will be in ambulatory settings.

For students interested in preventive medicine and primary care, a combined M.D./M.P.H. degree is available. Students selecting this option can take basic courses during the four years of medical school and complete their M.P.H. degree during a primary care residency at RWJMS or at an outside institution.

For additional information contact: Frank A. Simon, M.D., Senior Associate Dean for Academic and Student Affairs, UMDNJ-Robert Wood Johnson Medical School, 675 Hoes Lane, R-102, Piscataway, New Jersey 08854-5635.

NEW MEXICO

The undergraduate curriculum at the **UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE (UNM-SOM)** is tailored toward encouraging student interest in generalist careers. The Primary Care Curriculum (PCC), a separate curricular track, is a student-centered, problem-based, community-oriented track available to 20 entering students out of a class of 73. Students accepted into the PCC receive early primary care role-modeling. The school's data shows that PCC students have retained a generalist interest and practice primary care in New Mexico more often than conventional track students.

The Health of the Public Program (HOP), an elective open to all third- and fourth-year students, emphasizes clinical epidemiology, health economics, disease prevention/health promotion, and culture and health. Each participating student applies this HOP approach in a weekly continuity clinic, most of which focus on primary care. In the context of these clinics, each student is encouraged to develop a population-based project. Both UNM-SOM's family medicine residency and internal medicine residency offer strong community-based training.

As the recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Planning Grant, UNM-SOM plans to mount institution-wide changes to increase the percentage of its medical students choosing generalist residencies from 50% to 65%, increase the percentage of internal medicine residents choosing to become generalists from 40% to 60%, increase the percentage of pediatric residents choosing to become generalists from 45% to 60%, and double the number of family practice residents from 24 to 48.

PROPOSED
RECRUITMENT & ADMISSION INITIATIVES:

- ❑ UNM-SOM, along with the New Mexico Department of Health and New Mexico Health Resources, Inc., will coordinate a statewide recruiting effort to attract students to health and human service careers, particularly in medicine.
- ❑ A major element of this program will be the New Mexico Community Health Service Corps for Youth. The Corps for Youth will encourage young people to assume responsibility for their own health as well as responsibility to their peers and community.
- ❑ New members of the admission committee will be drawn principally from the pool of generalists on the medical school faculty and from the community.

NEW MEXICO *continues on next page*

PROPOSED:

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Starting with the first year, students will learn to apply clinical skills in a weekly continuity clinic. Primary care physicians at the clinic will provide mentorship roles for the students. Students will spend the last three months of the first year at primary care practices in rural or urban communities.
- ❑ The third year of medical school will be divided equally between ambulatory and inpatient rotations. A month-long, rural preceptorship, which is currently mandated for all fourth-year students, will be moved up into the third year.
- ❑ An important feature of the primary care clinical experience is that they will be designed, supervised, and monitored together by representatives of the three primary care departments.

PROPOSED:

RESIDENCY TRAINING INITIATIVES:

- ❑ Each primary care residency program will increase its commitment to resident participation in the multidisciplinary clinic at the University Hospital.
- ❑ A core curriculum for generalists will be developed. The generalist curriculum will include training in self-education, medical informatics, cost effectiveness, management skills, and effective multidisciplinary team participation.
- ❑ Consideration will be given to developing an optional fourth residency year for advanced generalist training.
- ❑ The Department of Internal Medicine will change its curriculum for all residents. All first-year residents will spend one to two months in practices outside the medical center.
- ❑ The Department of Pediatrics will expand community activities, including sending residents and faculty to rural areas of the state. The department will also institute continuity clinical experiences in local pediatricians' offices and other community sites.
- ❑ The Department of Family Medicine plans to increase its residency by adding four additional residents per year. The department has begun the process of applying for a "one plus two" program which will allow residents to spend their first year at UNM Medical Center and most of their last two years in the northern or southern communities of the state.

PROPOSED

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Loans will be forgiven for senior residents who go into a generalist field and practice in an underserved area.
- ❑ Payback schemes will be revised to give preferential treatment to generalists.
- ❑ Plans are underway to improve incentives for primary care physicians by increasing fees preferentially for generalists.
- ❑ The University Hospital Managed Care Office will work with various health plans to increase payments for services delivered by generalists.

Outcomes of each component of the generalist grant initiative will be tracked by the UNM-SOM Longitudinal Study Project, the group of program evaluators who conduct education research on the Primary Care Curriculum and the Health of the Public Program.

For additional information contact: Arthur Kaufman, M.D., Professor and Director of Family Medicine, University of New Mexico School of Medicine, Albuquerque, New Mexico 87131.

NEW YORK

ALBANY MEDICAL COLLEGE is committed to restructuring its medical school curriculum to revolve around a role-modeled managed-care system highlighting the importance of generalist physicians.

The medical school's curriculum changes integrate all four years of medical school. The courses encourage students to consider generalist careers while allowing them to understand how generalists interact with specialists. The innovations listed below are part of the curriculum changes which the school will implement in September of 1993. These innovations are supported by the New York State Health Department.

PROPOSED

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ First-year students can participate in a patient advocacy program or in the critical care technicians program that trains students to provide assistance to nurses in the Intensive Care Units. These experiences will allow students to more thoroughly understand patients' needs and the role of allied health professionals.
- ❑ A Continuity Clinic will serve as the institutional health delivery role model. The clinic will be a managed-care, case-managed program coordinated by a primary care provider. Students, in teams of four, (first-fourth year students) will work with primary care physicians and take on increasing levels of responsibility to acquire the skills necessary to practice as generalist physicians.
- ❑ The Comprehensive Care Case Study series will emphasize primary care, systems of care, comparisons of care, and other issues. This module will be offered throughout all four years of medical school and will complement or be integrated with other modules.
- ❑ The Health Care and Society Seminar Series (HCS) will deal with psychosocial, humanistic, legal, and ethical issues using a variety of presentation formats. The series will be presented for all four years of medical school and in the fourth year students will be required to act as mentors for students in the earlier years.
- ❑ A Population Analysis Unit will permit students to analyze, classify, and validate regional health concerns in the context of the greater community.
- ❑ The Clinical Skills Laboratory and Seminar Series will be presented throughout the four years. This series will teach physical diagnostic skills, procedural skills, and laboratory testing using a mixed presentation format including standardized patients. This series will complement and correlate with the Comprehensive Care Case Studies Series and the Health Care and Society Series.
- ❑ Third-year students will take a two- to four-week clerkship: the Comprehensive Care Orientation Rotation. All third-year clerkships will have 50% or greater training in ambulatory care.

PROPOSED

RESIDENCY TRAINING INITIATIVES:

- ❑ The role of the resident will change from service provider to trainee.
- ❑ Departments with a focus on primary care will provide at least 30% of the training in ambulatory sites.
- ❑ Residents will rotate on an intensive introduction to ambulatory care during one- to two-month modules.

NEW YORK *continues on next page*

- Seminar experiences will introduce residents to sophisticated discussions about systems of care, emphasize the role of the primary care provider as the coordinator of care, and prepare residents to be teachers or mentors in the undergraduate curriculum.
- A generalist rotation will be designed and implemented. Residents from non-primary care-based departments will be able to elect this rotation that will emphasize the main concepts of generalist care. Residents from specialty services will participate in seminars that will allow them to understand how they are to interact with primary care physicians in the future health care system.
- Primary care departments' residency programs will participate in the Upstate New York Clinical Competency Center, a MACY funded project, to develop residency program outcome objectives to improve the quality of generalist residency education.

For additional information contact: Henry S. Pohl, M.D., Associate Dean for Medical Education, The Albany Medical College, Office of Medical Education (A-34), Albany, New York 12208.

At the predoctoral level, the **ALBERT EINSTEIN COLLEGE OF MEDICINE** offers an array of programs intended to encourage students to consider generalist practice careers.

Introduction to Clinical Medicine, offered at the beginning of the first-year, emphasizes the psychosocial aspects of illness and places students at clinical sites for one afternoon a week. Of 178 placements available, 46 address the discipline-specific definition of primary care or generalist practice. Also in the first year, the Epidemiology and Biostatistics course is taught primarily in small groups by faculty members, many of whom are generalists.

The second-year curriculum includes case-discussion groups lead by generalists. The cases discussed provide clinical relevance to the basic science material being presented. Because they are lead by generalists, the applicability of basic science to the care of the patient is reinforced.

Third-year clinical clerkships in internal medicine and pediatrics have begun to use offices of practicing physicians as sites. These week-long blocks provide exposure to generalist practice in an urban environment.

The school offers a required two-month ambulatory block for fourth-year students. This clerkship is available in family medicine, adult medicine, or pediatrics. A recent survey of students who have completed this rotation (*Academic Medicine* 66[1991]:620-622) indicates that the experience does influence career choice.

A Department of Family Medicine has been established and will offer a required third-year clerkship beginning with the 1993-94 academic year.

A Division of General Pediatrics has been formed, and the Comprehensive Pediatric Primary Care Center has been established at the Bronx Municipal Hospital Center (BMHC). A key element of this has been the conversion of the pediatrics service at the Bronx Municipal Hospital Center from a traditional, specialty-oriented program that separated the inpatient and outpatient activities of staff and trainees, into a primary care practice model in which there is full integration of the inpatient and ambulatory care of patients. Clinical training has been modified to make use of this resource. A completely redesigned third-year clerkship, capitalizing on the opportunity to provide an experience integrating ambulatory and inpatient care is now in operation at this site.

The college has also modified the requirements of the senior year to provide an incentive for students with an interest in general pediatrics to select the BMHC site for their required subinternship and ambulatory care training. Students will be credited for completion of both these requirements (each currently a two-month obligation in the traditional curriculum) by participation in a single three-month rotation in the new program. This

provides an additional month of elective time for the students, while providing intensive training in a generalist model.

For additional information contact: Michael J. Reichgott, M.D., Ph.D., Associate Dean for Students and Graduate Medical Education, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, New York 10461.

During 1992, the **COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS** implemented curriculum revisions designed to give students an early introduction to issues such as patient advocacy, integration of services, and continuity of care.

The four-year program referred to as "PNS" (preventive medicine, health promotion, population sciences, nutrition, and the social and behavioral basis of medicine) provides first-year students with a required selective in primary care. Also, a single year-long interdepartmental course, Biological Sciences Basic to the Practice of Medicine, will replace several basic science course offerings.

A new six-week primary care clerkship will be required for all third-year students, starting in 1994. The clerkship will provide experiences in inner-city, suburban, and rural settings. Preventive medicine, epidemiology, nutrition, and ethics topics will be integrated into the third- and fourth-year clerkships and courses.

For additional information contact: Ronald E. Drusin, M.D., Associate Dean for Curricular Affairs, Columbia University College of Physicians and Surgeons, 630 West 168th Street, New York, New York 10032.

Since 1986, **CORNELL UNIVERSITY MEDICAL COLLEGE** has offered a loan program that includes reduced repayment and forgiveness on a case by case basis for graduates who choose careers in select specialties and have financial difficulties. Graduates who are practicing primary care in a physician shortage area are eligible for this program's benefits.

The college instituted a new program in 1992 to provide support to graduates who elect a generalist residency and plan to practice primary medicine in New York City upon completion of their training. The support consists of a substantial reduction of the students' educational loans.

For additional information contact: Daniel R. Alonson, M.D., Senior Associate Dean, Cornell University Medical College, 1300 York Avenue, New York, New York 10021.

Several studies are underway at the **MOUNT SINAI SCHOOL OF MEDICINE OF THE CITY UNIVERSITY OF NEW YORK** to analyze the school's current support of primary care programs. A Dean's committee is studying the availability of primary care opportunities in the curriculum, and a President's committee is assessing the role of ambulatory care in the Mount Sinai Medical Center.

A representative from the Urban Institute for Family Practice is available on a weekly basis to meet with students and discuss electives, residencies, and careers in family medicine. Office space is provided for the representative in the school's Office of Student Affairs. A student-driven family practice organization is strongly supported in the school.

NEW YORK *continues on next page*

The school, in cooperation with one of its major affiliates, is developing a residency program in family practice to be based in Manhattan. The program will serve as a resource for exposing students to family practice.

For additional information contact: Barry Simmel, M.D., Dean for Academic Affairs, Admissions and Student Affairs, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, New York 10029-6574.

During 1992, the **NEW YORK MEDICAL COLLEGE** initiated the fourth year of a six-year program at St. Vincent's Hospital and Medical Center that leads to both the M.D. degree and board eligibility in internal medicine. This program reduces the total training time from seven years to six years and offers a longitudinal curriculum designed to prepare the student for a career in primary care internal medicine. The program combines the last year of medical school with the first year of residency.

In the first year, students begin their education with Introduction to Primary Care. This course's curriculum encompasses the principles of primary care practice. Each unit is taught utilizing two preceptor sessions and one seminar session. Preceptor sites were selected to offer a wide variety of practices and clinical specialties.

More than 90% of participating students elect to continue their primary care experience into the second year with the Physical Diagnosis course. Primary care students receive the same lectures as the students in the hospital-based physician diagnosis course, but they have their entire clinical experience at the ambulatory care site, the same site that they attended during the first year of school. The faculty role models place an emphasis on integrating physical diagnosis with the principles of primary care.

The third year includes a primary care oriented clerkship in internal medicine and pediatrics which was piloted in the academic year 1990-91. The experience in the clerkship was modified by restructuring portions of the existing clerkship and placing specific emphasis on the elements important to the education of a primary care physician. It consists of a six-month block, the first two months in pediatrics and months three through six in medicine. Students also spend one half-day per week in a combined medicine/pediatrics clinic and one half-day per week in a surgical subspecialty clinic.

The fourth year is designed to meet all the requirements of the senior year at the college and the requirements of the first year of an internal medicine residency. During years five and six, the trainee assumes the level of responsibility of, respectively, a second- and third-year resident. Importance is placed on continuity of care with two ambulatory block rotations in addition to the weekly continuity clinic.

Students in the top 20% of New York Medical's class receive a $7,500 scholarship and a $7,500 loan in years two through four. The loan is forgiven if these students pursue generalist careers. Students in a special six-year program leading to the M.D. degree and board certification in internal medicine receive a loan for tuition in the fourth year of medical school. The loan is forgiven if they pursue a career in general internal medicine. A stipend to cover living expenses is also available during the fourth year.

For additional information contact: Martha Grayson, M.D., Associate Dean for Primary Care, New York Medical College, Valhalla, New York 10595.

The UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY has an expanded four-year curriculum that provides students with patient care contact in year one and offers a variety of community services opportunities.

During the first year, the Introduction to Doctoring course allows students to spend one half-day per week observing in the office of a primary care physician, who is usually a family practitioner. Psychosocial Medicine I (PSM), provides an opportunity for all first-year students to learn to interview patients in various settings, many of them primary care oriented.

In the second year, a continuation of the PSM course meets for two hours, twice weekly. All students are overseen by preceptors, the vast majority of whom are from internal medicine, and see patients largely on primary care services.

First- and second-year students can gain community health experiences through the Students of Rochester Outreach program. Students work with the homeless, single parent families, and others in need, doing health assessment and counseling under the supervision of primary care providers. Approximately 100 first- and second-year students participate.

Introduction to Human Health and Illness, a series of "whole case" conferences emphasizing the multidimensional aspects of health and illness, is offered during years one and two. Many of the sessions are taught by physicians and other providers from primary care disciplines.

At the beginning of the third year, a six-week general clerkship in either internal medicine or adolescent medicine is required for all students. Another third-year clerkship option allows students to take six weeks of the twelve-week medicine clerkship in a practice-based setting, either urban or rural, precepted by a senior practicing internist. One-half of the required six-week pediatric clerkship takes place in ambulatory settings.

Fourth-year curriculum requirements include: 1) an ambulatory continuity experience in either family medicine, internal medicine, or pediatrics; 2) a four-week externship on primary care inpatient services. About 80% of the students complete this requirement in either internal medicine or pediatrics; and 3) a four-week selective in either family medicine, geriatrics, or rehabilitation medicine that all students must take.

For additional information contact: Jules Cohen, M.D., Senior Associate Dean for Medical Education, University of Rochester Medical Center, 601 Elmwood Avenue, Box 601, Rochester, New York 14642.

Beginning in fall 1993, the SUNY HEALTH SCIENCE CENTER AT BROOKLYN COLLEGE OF MEDICINE will offer a problem-based learning (PBL) track for 32 students. As part of the first- and second-year PBL curriculum, participating students will spend one afternoon a week with patients. The course leaders will be generalists, and students will gain knowledge of problems physicians tend to encounter in outpatient settings.

Within the school's standard curriculum, first- and second-year students are offered a number of primary care oriented clinical electives. The family practice elective provides students with a four-year continuity and team-based experience at University Hospital of Brooklyn. Several third-year clerkships provide outpatient clinic experiences. All fourth-year students complete a required ambulatory care course.

For additional information contact: Elena K. Lesser Bruun, Ed.D., Associate Dean for Education, SUNY Health Science Center at Brooklyn College of Medicine, 450 Clarkson Avenue, Box 97, Brooklyn, New York 11203.

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SUNY AT BUFFALO SCHOOL OF MEDICINE AND BIOMEDICAL SCIENCES is concentrating on providing meaningful primary care experiences for all medical students. In 1991, a required two-month comprehensive ambulatory care experience was implemented for all fourth-year students. Three new family medicine centers place residents and students in suburban, rural, and inner-city affiliated hospitals. The Department of Family Medicine has a rural generalist program. A new rural family medicine residency has been accredited in Cuba, New York.

A recently signed contract involving the Graduate Medical and Dental Education Consortium of Buffalo, six teaching hospitals, the University of Buffalo, the New York State Department of Health, and four private payers will allow revenue and indirect medical education funds to be used over a three-year period to increase the proportion of generalists enrolled in residency programs to 50% from 35%.

The State University of New York at Buffalo School of Medicine and Biomedical Sciences will use the Robert Wood Johnson Foundation Generalist Physician Initiative Grant to effect fundamental long-term changes to assure that 50% of its graduates practice in generalist fields.

PROPOSED

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ Establish a Regional Rural College Network to identify applicants with high primary care potential.
- ❑ Establish a pilot inner-city high school partnership to identify and recruit minority applicants.
- ❑ Establish programs to attract premed students in Niagara County through a summer institute developed in conjunction with Niagara University.
- ❑ Collaborate with western New York rural hospitals and colleges to attract and interview applicants.

PROPOSED

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Change the existing freshman clinical advisorship to emphasize early exposure to primary care physician role models.
- ❑ Refine the existing eight-week interdepartmental Community Oriented Primary Care (COPC) rotation in preparation for a junior clerkship in primary care.
- ❑ Implement a clinical year rotation through a prevention and intervention project in a pilot Hispanic high school.
- ❑ Further develop community academic practice sites in urban and rural areas where students and residents will train with primary care physicians.
- ❑ Develop a senior primary care preceptorship and shift the current eight-week COPC requirement from the senior to the junior year.

PROPOSED

RESIDENCY TRAINING INITIATIVES:

- ❑ Develop curricula in general pediatrics and general internal medicine.
- ❑ Establish interdisciplinary managed care training among family medicine, general internal medicine, and general pediatrics.

PROPOSED

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Accelerate regionalization of practice and training sites in underserved urban and rural communities.
- ❑ Develop generalist practice opportunities in western New York.

- ❑ Provide academic enrichment programs (research and teaching skills) for generalist physicians to enhance their impact as role models.
- ❑ Expand investment role of payers to include loan- forgiveness incentives.
- ❑ Develop a regional data network to link regional providers with their colleagues and with the University.

For additional information contact: John Naughton, M.D., Dean, SUNY at Buffalo School of Medicine and Biomedical Sciences, 3435 Main Street, Buffalo, New York 14214.

The **SUNY STONY BROOK SCHOOL OF MEDICINE** offers primary care experiences for students throughout the four-year curriculum.

After completion of the first year of medical school, 10 students can choose to spend up to eight weeks in a summer elective directed by the Department of Family Medicine. The experience may be anywhere in the U.S., including rural areas, indian reservations, health maintenance organizations, or private practices. Students are supervised by a family physician.

Required first- and second-year courses that offer generalist perspectives include: 1) Medicine in Contemporary Society, which allows students to examine ethical, social, economic, and historical dimensions of medicine; 2) Introduction to Preventive Medicine, which addresses health problems in populations, the epidemiological characteristics of disease, and common illnesses; 3) Introduction to Human Behavior, coordinated by a family physician, emphasizes the role of primary care practitioners and focuses on the biopsychosocial model of medical care; and 4) Introduction to Clinical Medicine, coordinated by a general internist and a family physician, teaches interviewing, history-taking and physical diagnosis skills.

All third-year students take a required six-week primary care clerkship, coordinated by the Department of Family Medicine. The clerkship offers ambulatory care experiences at residency training program ambulatory sites, public health clinics, private physicians' offices, and home visits.

All fourth-year students must complete a one-month primary care rotation under the supervision of either family physicians, primary care internists, or general pediatricians. Selection of site, geographic location, and physician is made by the student.

For additional information contact: Arnold Jaffe, Ph.D., Assistant Professor, Department of Family Medicine, SUNY at Stony Brook, Stony Brook, New York, 11794-8461.

The **SUNY HEALTH SCIENCES CENTER AT SYRACUSE COLLEGE OF MEDICINE** admission committee is aware of the need for generalist physicians to practice in rural areas, as well as in inner-city environments. In the selection process, students from both areas are given careful consideration.

Students have opportunities to provide health care to underserved populations and gain increased clinical experience by working with volunteer physicians at two student-initiated clinics for the homeless.

The Rural Medical Education Program is a multidepartmental program, organized and coordinated through the Department of Family Medicine. Students selecting this option spend nine consecutive months in a rural community, training under the supervision of board certified family physicians and other specialists. The rural placement begins in period five or six of the third year and extends through period two or three of the fourth year. Students participate in continuous and comprehensive care of preceptors' patients, including management

NEW YORK *continues on next page*

of both ambulatory and hospitalized patients. The development of diagnostic, management, and communication skills is stressed.

Each year, 40 SUNY-Syracuse College of Medicine third-year students receive their clinical education at the Clinical Campus in Binghamton. The core curriculum consists of 52 weeks of clinical experience, beginning with a two-week advanced skills program in acute care. Students then participate in 11 clinical clerkships, including a required year-long primary care clerkship. The longitudinal primary care program, developed and conducted by the Department of Family Medicine, is designed to integrate the study of social behavior and management sciences with "real patient" experiences. Students spend one half-day per week in a primary care physician's office.

The geriatrics/gerontology clerkship is the first in this discipline to be required as part of a medical school curriculum in the United States. Students care for the normal aged in ambulatory settings as well as patients in nursing home settings.

A recent study (*Academic Medicine* 66[1991]:234-236) compared SUNY-Syracuse medical students who graduated from the Clinical Campus from 1981 through 1989 to SUNY-Syracuse graduates who spent their third year at the Syracuse campus. A significantly greater proportion of the clinical campus students selected a family practice residency.

For additional information contact: A. Geno Andreatta, Dean of Student Affairs, SUNY Health Science Center at Syracuse, Office of Student Affairs, 155 Elizabeth Blackwell Street, Syracuse, New York 13210.

NORTH CAROLINA

The **BOWMAN GRAY SCHOOL OF MEDICINE** has demonstrated a commitment to primary care medical education through curriculum changes and through the recent implementation of a primary care development program funded by the Kate B. Reynolds Trust.

Using the Trust's financial support, the primary care development program's goals are to implement changes in the following areas in order to increase primary care opportunities: 1) high school and college student recruitment; 2) admission policies for rural students; 3) undergraduate medical education curriculum; 4) the ability of graduate medical education to produce and retain primary care physicians; and 5) support for individuals entering primary care practice in underserved areas.

The problem-based curriculum, in existence since 1987, admits 24 entering students per year. Students in this track have a required eight-week, first-year community experience that provides them with primary care role models early on. To date, a higher percentage of graduating students from the problem-based learning track have entered primary care disciplines. Within the standard curriculum, first-year medical students can elect to spend one afternoon per week during the second semester in a community physician's office.

Third-year students have a required four-week family medicine clerkship. The clerkship consists of didactic and clinical experiences. Currently, over 30% of third-year students' clinical time is spent in ambulatory settings.

Senior students have a required eight-week community health project. Four weeks are spent with a physician in a North Carolina primary care setting. Some students spend the entire eight weeks in a rural area. Participating students' perceptions of the value of this project were analyzed and published in *Academic Medicine* 67(1992):479-481. All fourth-year students also have a required emergency room rotation.

Faculty in the Department of Family Medicine, chaired by Marjorie Bowman, M.D., assume a significant part of the curriculum responsibility in the medical school. A Section on General Internal Medicine was recently created and has 22 members.

For additional information contact: James N. Thompson, M.D., Associate Dean, The Bowman Gray School of Medicine of Wake Forest University, Medical Center Boulevard, Winston-Salem, North Carolina, 27157-1014.

Students at **DUKE UNIVERSITY SCHOOL OF MEDICINE** receive experience in ambulatory primary care settings during the required second-year clerkships. Each student rotates at least four weeks (some eight weeks) in a community-based office of a practicing family physician. The required pediatrics clerkship offers four weeks of generalist outpatient experience. During the required obstetrics/gynecology clerkship rotation, students spend from four to six weeks in a community health center working with prenatal care providers.

During the 1993-94 academic year, six Duke students, each with an interest in primary care, enrolled in the new third-year study program in epidemiology, health services, and health policy. This program focuses on research in issues relevant to primary care.

Fourth-year students have a variety of electives that offer primary care experiences such as a subinternship in medicine, a rotation into the community to work with a primary care physician, and an emergency room rotation.

For additional information contact: Dan Blazer, M.D., Ph.D., Dean of Medical Education, Duke University Medical Center, School of Medicine, Durham, North Carolina 27710.

EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE is a leader in the production of primary care doctors. The school's success can be attributed to several well-established programs that give prominence to primary care.

CURRENT
RECRUITMENT & ADMISSION INITIATIVES:

- ❑ The admission committee has always addressed the school's primary care mission in its selection process.
- ❑ The committee actively seeks students who come from rural areas within North Carolina.
- ❑ An academic scholarship is available to a student who shows a strong commitment to primary care service at the time of admission.

CURRENT
UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ In the first and second years of the curriculum all students spend 72 hours in the home and office of a practicing family physician.
- ❑ The Primary Care Conference, which is directed by the Department of Family Medicine, provides instruction in interviewing, making oral and written presentations, establishing the doctor-patient relationship, and providing patient counseling. Students take this course throughout the first and second years.
- ❑ An eight-week family medicine clerkship is required. Students spend six of the eight weeks working directly with community-based practicing generalists.
- ❑ An eight-week pediatric clerkship with a four-week ambulatory experience is available.

NORTH CAROLINA *continues on next page*

- A ten-week internal medicine clerkship with two weeks of ambulatory experience is also available.
- All fourth-year students are required to complete a two-month primary care rotation.

CURRENT

RESIDENCY TRAINING INITIATIVES:

- During 1991, the East Carolina University School of Medicine, the Department of Family Medicine, and Pitt County Memorial Hospital developed the "3 + 3" program. This program allows selected fourth-year medical students to elect a curriculum paralleling the usual rotations for a first-year resident in family medicine. Students who complete this curriculum receive the M.D. degree at the end of the first year and have the option of being appointed as second-year residents in family medicine immediately following graduation from medical school.
- A rural residency program in family medicine has received provisional accreditation and will enroll residents in July 1993.

CURRENT

PRACTICE ENTRY & SUPPORT INITIATIVES:

- The Department of Family Medicine has piloted a Partners Program, which allows medical school faculty to provide office coverage support for practicing physicians in the region. This includes coverage for vacations, weekends, and continuing medical education.

The school plans to use funding from the Robert Wood Johnson Foundation Generalist Physician Initiative Grant to meet several goals: 1) to increase ultimate generalist practice rates from 50% to 65%; 2) to increase the size of the family practice residency to 54 positions through two innovative programs; and 3) to ensure that 65% of the graduates of internal medicine and pediatrics programs become generalist practitioners.

PROPOSED

RECRUITMENT & ADMISSION INITIATIVES:

- Premedical interventions will include a junior high and high school educational series taught jointly by faculty and community physicians.
- State government agencies and community health access groups will work together to create financial support and identify high school and college students interested in primary care.
- Long-term mentoring relationships between community preceptors and promising high school and college students will be fostered.
- Practicing generalists will be added to the admission committee.

PROPOSED

UNDERGRADUATE CURRICULUM INITIATIVES:

- The primary care curriculum will be centrally coordinated with joint administration of key courses.
- Student clerkships in medicine and pediatrics will be modified to improve the ambulatory experience.
- Summer primary care opportunities for students between the first and second years will be expanded.
- The number of rural training sites, where students can be educated jointly by full-time faculty and community physicians, will be increased.

PROPOSED:

RESIDENCY TRAINING INITIATIVES:

- ❑ The "3 + 3" family medicine residency program will be expanded and similar programs in pediatrics, medicine, and medicine/pediatrics will be added.
- ❑ A generalist fellowship program open to graduates of all of the school's primary care residency programs will be developed.

PROPOSED:

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ *Locum tenens* coverage, a regional televideo network, and direct computer linkages will be provided.
- ❑ Along with government partners, financial incentives for generalists practicing in underserved areas will be developed.
- ❑ The medical school plans to involve the region's primary care physicians in a faculty development program and increase their participation in all areas of the medical school's educational programs.

For additional information contact: Thomas G. Irons, M.D., Senior Associate Dean, East Carolina University School of Medicine, Greenville, North Carolina 27858-4354.

The **UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL SCHOOL OF MEDICINE** curriculum offers students ambulatory-based experiences in primary care.

A four-week family medicine clerkship has been introduced in the third year. Clerkship practice sites are located throughout North Carolina. The clerkship is coordinated by the Department of Family Medicine through the Area Health Education Centers program.

The pediatrics clerkship has been expanded from six to eight weeks. The additional two weeks are spent entirely in ambulatory care settings.

The three-month third-year medicine clerkship now has a four-week block in ambulatory care settings involving generalist physicians at 45 sites in North Carolina.

All fourth-year students are now required to complete a four-week Ambulatory Care Selective. Students work with faculty preceptors in community settings throughout the state.

A major new elective is the Community Health Project. Sixty-five sites have been identified throughout North Carolina where students may work on a project with community groups, supervised by local faculty preceptors and preceptors at Chapel Hill. This elective may be taken at anytime during or over the period of the four-year curriculum.

During 1989, the medical college, along with the North Carolina AHEC and the Hot Springs Health Program—the sole source of health care in Madison County—developed the Madison Community Health Program, a community-oriented, primary care-based health program. Medical students can now take a longitudinal one-month elective rotation in Madison County and family practice residents have a three-week required rotation. This initiative was recently reviewed in *Family Medicine* 24(1993):95-99.

For additional information contact: William D. Mattern, M.D., Professor of Medicine, Associate Dean for Academic Affairs, The University of North Carolina at Chapel Hill, CB# 7000, Rm. 132 MacNider Bldg., Chapel Hill, North Carolina 27599-4017.

OHIO

CASE WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE plans to use the Robert Wood Johnson Foundation Generalist Physician Initiative Grant to implement programs that will double the proportion of generalists graduating. The school's affiliation with the Henry Ford Health System will permit the elimination of the usual boundaries between preclinical, clinical, and residency education, and enhance the Robert Wood Johnson funded initiatives.

Admission policies and selection strategies to identify students who are likely to thrive in this new curriculum will be implemented. The primary features of the new unified curriculum will include: 1) early mentoring and primary care opportunities; 2) constant interaction with generalist role models; 3) early work experience intermingled with residency; 4) experience in initiating projects for change undertaken with faculty early in the medical school experience; 5) special opportunities for credentialing at the Masters degree level; and 6) longitudinal opportunities for interaction with governmental components for policy making. Incentives to allow students to attain financial independence more rapidly are also being developed.

For additional information contact: David P. Stevens, M.D., Vice Dean (Acting) School of Medicine, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, Ohio 44106-4915.

The MEDICAL COLLEGE OF OHIO curriculum offers students educational experiences and interactions with generalist physicians in ambulatory settings through required and elective courses.

About 45 first-year students select the optional summer preceptorship in family medicine. Beginning after the completion of the first year, students work in one-to-one relationships with family medicine physicians in community private practice and group practice settings. Starting in the summer of 1993, first-year students will be provided opportunities to work with community health agencies and community health physicians. Both inner-city and rural settings will be utilized for the community health opportunities. Students completing their third- and fourth-year clerkships are required to take four weeks of family medicine each year. All students are required to complete two four-week Area Health Education Center clerkships in rural settings either during their third or their fourth year.

The medical college recently implemented an accelerated family medicine residency program. This program allows students to complete the fourth year of medical school and the first year of the family medicine residency concurrently. Students who enter this program are eligible to receive a $5000 bonus with their first paycheck.

For additional information contact: Richard F. Leighton, M.D., Vice President for Academic Affairs, Dean of the School of Medicine, Medical College of Ohio, P.O. Box 10008, Toledo, Ohio 43699-0008.

NORTHEASTERN OHIO UNIVERSITIES COLLEGE OF MEDICINE has proposed several objectives and interventions that, along with the programs already in place, are designed to increase to 50% the percent of graduates selecting generalist careers by the year 2000.

Because the school has a combined degree program (B.A. M.D.), the admission process focuses on high school students. The college sponsors a "A Day in the Life of . . ."

program for high school sophomores and juniors. During this experience, students spend the day with family physicians in patient care activities. The college of medicine also sponsors MEDCAMP for high schools students. MEDCAMP is a two and one half-day summer program taught primarily by family physicians that introduces students to topics necessary to become a physician. Special consideration is given to minority and rural students.

The Department of Family Medicine sponsors 20 students for summer fellowships in problem-based learning. Family physicians serve as tutors for the students and the curriculum includes weekly visits to area primary care practitioners.

A third-year four-week family practice clerkship, which is primarily ambulatory in nature, was implemented for the class entering in 1993. The four-week third-year primary care preceptorship now occurs mainly in rural areas.

Several activities are in the planning stage including: 1) revising admission policies and procedures to give strong consideration to students whose characteristics suggest they will select a generalist career; 2) restructuring the third year to reduce clerkship time in some areas and provide for additional time for the family medicine clerkship and the addition of a continuity of care experience. Each third-year student would be assigned a family to follow throughout the year. Each time a member of the family visited a health facility, the student would be excused from their clerkship to attend the appointment; and 3) increasing the activities of the family practice interest group.

For additional information contact: Ralph E. Berggren, M.D., Vice President for Academic Affairs and Executive Associate Dean, Northeastern Ohio Universities College of Medicine, P.O. Box 95, 4209 State Route 44, Rootstown, Ohio 44272-0095.

The educational mission of **WRIGHT STATE UNIVERSITY SCHOOL OF MEDICINE** is to provide students with an exceptional foundation in primary care medicine. Currently, nearly one-half of the school's graduates enter primary care practices. Beginning with the first week of medical school, students are introduced to hands-on patient care through the Introduction to Clinical Medicine (ICM) course. The ICM course continues through the first two years of basic and behavioral science studies. The Undergraduate Fellowship in Family Practice is available in the summer between the first and second academic years. Through this special program students participate in the daily activities of a family practice physician. Community service projects such as "Student to Student", where medical students speak on health topics in local public school classrooms, provide educational experiences while serving the needs of local communities.

The medical school's 28 affiliated hospitals and health care institutions, situated in suburban, rural, urban, and federal environments, are used extensively for clinical training in clerkships and sponsored residency programs.

For additional information contact: Albert E. Langley, Ph.D., Associate Dean for Academic Affairs, Wright State University School of Medicine, P.O. Box 927, Dayton, Ohio 45401-0927.

OKLAHOMA

The UNIVERSITY OF OKLAHOMA HEALTH SCIENCE CENTER COLLEGE OF MEDICINE fosters student interest in primary and rural health care through recruitment efforts, student activities, and collaborative programs, as well as through its curriculum. Nearly one-half of the college's graduates have matched into family medicine, internal medicine, or pediatrics through the National Resident Matching Program.

Admission and recruitment efforts are geared to identify students with an interest in primary care. Recruitment trips highlight the curriculum of the college and are supplemented by personal interaction with faculty members or practitioners from that community.

A series of coordinated clinical experiences offer students early patient care opportunities. The departments of family medicine, internal medicine, and pediatrics coordinate the first-year Introduction to Clinical Care course and the second-year Introduction to Clinical Medicine course. Between the first and second years of medical school, the Medical Education and Community Orientation program offers participating students an opportunity to learn about patient care from physicians in rural communities. The experience lasts from 4 to 10 weeks and occurs at smaller rural hospitals in Oklahoma.

Four years ago, the school implemented a required third-year clerkship in family medicine. Fourth-year students are required to take an ambulatory medicine course as well as a one-month rural preceptorship in an Oklahoma community with less than 7,500 population.

For students who want to enter practice in a rural community, financial assistance is available from the state Physician Manpower Training Commission.

For additional information contact: Admissions and Student Affairs, University of Oklahoma College of Medicine, P.O. Box 26901-BMSB 353, Oklahoma City, Oklahoma 73190.

OREGON

In order to increase primary care options for students, **OREGON HEALTH SCIENCES UNIVERSITY SCHOOL OF MEDICINE** is implementing a curriculum revision process. The revised curriculum, which was introduced in the 1992-93 academic year, will allow for better integration of basic and clinical sciences and for earlier patient contact. Principles of Clinical Medicine will be offered during the first and second years and will emphasize interaction of basic science and clinical science and social aspects of health care. A required rural primary care rotation will be added to the third-year curriculum as well as a required clerkship in family practice. Self-directed and student-centered teaching methods will be utilized in all four years of the new curriculum.

For additional information contact: Julian S. Reinschmidt, M.D., Associate Dean, Oregon Health Sciences University School of Medicine, 3181 S.W. Sam Jackson Park Road, Portland, Oregon 97201-3098.

PENNSYLVANIA

An average of 18% of **HAHNEMANN UNIVERSITY SCHOOL OF MEDICINE** graduates have entered family medicine, internal medicine, and pediatrics residency programs and remained in these fields during the past seven years. The school currently offers a number of programs designed to encourage students to pursue generalist careers.

Undergraduates are guaranteed admission to the medical school upon graduation through articulation agreements among Hahnemann, the affiliated hospitals, and their local colleges (Wilkes University, Gannon University, Boston University, and Muhlenberg College). An array of programs are in place to aid in attracting and nurturing underrepresented minority students at the high school, college, and medical school levels. The Wilkes-Hahnemann Recruitment Program, a six-year federally-funded combined undergraduate and medical school program, which was disbanded in 1986, is being renewed. One hundred and fifty physicians graduated from this program between 1978 and 1990, and over 50% entered generalist fields. Over 50 preceptors are used for the required four-week fourth-year ambulatory rotation. More than 60% of undergraduate clinical education occurs at Hahnemann's network of affiliated hospitals. Clinical campuses and major affiliates offer all of the required third-year courses and fourth-year electives.

As a recipient of a Robert Wood Johnson Foundation Generalist Initiative Grant, Hahnemann School of Medicine intends to increase the percentage of each class entering generalist fields by 5% per year, for a total of 177 additional generalist physicians by the year 2000. Thereafter, the school anticipates that about 50% of each class will become generalist physicians. In order to meet this goal, changes will occur with respect to admission, curriculum, residency training, and practice entry and support.

PROPOSED
RECRUITMENT & ADMISSION INITIATIVES:

- ❑ Additional interviewers with backgrounds and interest in generalist fields will be engaged. At least one generalist physician from each of Hahnemann's affiliate members will serve on the admission committee. Specific rewards and recognition, including promotion decisions, will be linked to interviewing.
- ❑ Profiles and test instruments will be used to assist in identifying individuals likely to choose a generalist career.
- ❑ Hahnemann will continue to develop articulated admission programs and affiliations aimed at attracting medical students, particularly from underserved areas, to generalist fields.
- ❑ Funding will be sought for a retrospective analysis of all individuals who have graduated, including: students from existing articulated programs, non-traditional students, and minority students to discover indicators of generalist career choice.
- ❑ All recruitment publications will be reviewed for subtleties of wording that might influence students either for or against specific medical disciplines.

PROPOSED
UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Continuity experiences in ambulatory settings will be provided for one half-day per week beginning with the first year of medical school.
- ❑ Increased attention will be given to psychosocial and epidemiological aspects of medicine.
- ❑ The Introduction to Clinical Medicine course will be taught over two years with increased emphasis on generalist roles and skills.

PENNSYLVANIA *continues on next page*

- ❑ A combined two-year clinical instruction phase will be developed in conjunction with the school's affiliates to replace the previous separation between third and fourth years. This will allow students the flexibility to sequence clerkships in such a way as to increase opportunities for earlier, additional emphasis on generalist-oriented clerkships.
- ❑ A required six-week ambulatory rotation in family medicine will be added to the third-year clerkship requirements, and one of the two required subinternships in medicine will be a primary care subinternship. Each of the other clerkships will provide a "generalist track" for at least half of the students so that the concepts necessary to generalist practice will be emphasized in each of the specialties.
- ❑ An ambulatory elective in applying psychiatry to primary care will be offered.
- ❑ A decentralization of third- and fourth-year clerkships will occur.
- ❑ Training programs in team and interactive teaching, clinical problem solving, and use of the clinical model system for basic science are being refined.
- ❑ Generalist physician preceptors will be trained for teaching students and will be recognized and rewarded for such.
- ❑ Students will be assigned practicing generalists as mentors/role models.

PROPOSED

RESIDENCY TRAINING INITIATIVES:

- ❑ The proportion of generalists will be increased relevant to specialists within medicine and pediatrics.
- ❑ Family practice residencies will be initiated and common clinical teaching sites will be established. There will be increased cooperation among disciplines and among residency programs in the system.
- ❑ The residency curricula will include: continuity clinical experience, office-based subspecialty training, a core curriculum lecture series, and an increased emphasis on clinic epidemiology and psychosocial aspects of medicine.
- ❑ The Primary Care Track of the internal medicine residency will be augmented to offer enhanced sites and training opportunities.

PROPOSED

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Hahnemann, in conjunction with its affiliates, is designing programs to aid physicians in maintaining generalist careers. The career counseling program will be expanded, and a program of free continuing medical education will be developed.
- ❑ Hahnemann is also involved in identifying communities in need of physicians and in working with local leaders to obtain physicians.

For additional information contact: Harry Wollman, M.D., Senior Vice President, Chief Academic Officer and Dean, Hahnemann University School of Medicine, Broad and Vine Street, Mail Stop 440, Philadelphia, Pennsylvania 19102-1192.

The **JEFFERSON MEDICAL COLLEGE OF THOMAS JEFFERSON UNIVERSITY** initiated the Physician Shortage Area Programs (PSAP) in 1974. The PSAP has been influential in increasing the number of family doctors practicing in rural and underserved areas of Pennsylvania. PSAP graduates have settled in 24 of the 39 rural counties in the state.

The PSAP preferentially recruits and admits applicants from nonmetropolitan areas of Pennsylvania who are committed to practice in rural and underserved communities. Approximately 24 applicants each year are admitted into the program. Many students are recruited through a cooperative arrangement between Jefferson and six undergraduate institutions in the state. Accepted students are eligible for preferential financial aid and are

assigned a family medicine faculty advisor. The program's family medicine curriculum includes a required six-week third-year clerkship in family medicine at one of two rural locations and a senior outpatient subinternship in family medicine, frequently consisting of a preceptorship with a rural family physician. Students in the program go on to complete a three-year family medicine residency that provides field experiences in both rural and urban practice. A recent study (*New England Journal of Medicine* 328[1993]:934-939) found PSAP graduates to be more likely to enter family medicine and to practice in a rural area than non-PSAP Jefferson graduates.

For additional information contact: Howard K. Rabinowitz, M.D., Professor and Vice Chairman, Department of Family Medicine, Jefferson Medical College of Thomas Jefferson University, 1015 Walnut Street, Suite 401, Philadelphia, Pennsylvania 19107-5099.

The **MEDICAL COLLEGE OF PENNSYLVANIA (MCP)** offers students interested in generalist careers an alternate curriculum choice, as well as opportunities to provide primary care services in the community. Nearly 35% of the college's 1987 graduates are practicing in a generalist specialty.

Forty-eight first- and second-year students learn in a self-directed small-group interactive format in the Program for Integrated Learning (PIL) curriculum. The program includes a nine-week primary care practicum in a preceptor's office during year one in either Pittsburgh, Erie, or Philadelphia, Pennsylvania. During the second year, PIL students spend one half-day per week at a designated community-based health agency where they work with a preceptor on community health projects.

The Medical College of Pennsylvania/Hamot Family Practice Summer Fellowship provides five medical students who have completed their first year within the traditional curriculum with an opportunity for a four-week family practice fellowship. The fellows learn clinical skills, work with both resident family physicians and practicing family physicians, become integrated into the patient care team, and follow a schedule of clinical and workshop activities.

CURRENT:

COMMUNITY SERVICE INITIATIVES:

- ❑ The MCP, in conjunction with three other Philadelphia medical schools, has initiated the Community Health Summer Internship Program. The internship program allows 12 students to spend six weeks, in the summer after their first year of medical school, working in community health and social service agencies. In addition to providing training for the students, this initiative helps alleviate some of the pressing health needs found in these urban communities.
- ❑ The program supports two students in the development of a health-needs profile of two other communities. The profile is designed to assess the feasibility of placing future MCP students as interns in these neighborhoods, of improving health care in community settings, and of increasing the community-based aspects of medical education.
- ❑ The Community Service Volunteer Program offers students a chance to volunteer their time to provide needed services to the local community. Thus far the students' projects have included: 1) educating young people on personal health issues such as AIDS, sexual growth, alcohol, drugs, and smoking; 2) reading stories to students in grades one through four; and 3) visiting hospital patients who otherwise would not have received visitors.
- ❑ Under the direction of two MCP physicians, students conduct health education classes for residents of a Salvation Army facility.

- Similarly, students are conducting health education programs at a therapeutic residential facility for women and their children.
- Students Teaching AIDS to Students is an active community-based health education program whereby medical students educate youth in both public and private, urban and suburban middle schools.
- Since 1991, MCP has had a partnership with Simon Gratz High School, providing a variety of adolescent medical and educational programs.
- All third-year students are part of a health care team providing care at this clinic during their six-week pediatric rotation.
- Fourth-year students taking an elective course in adolescent medicine rotate through this clinic.
- Third- and fourth-year students are also members of the health care team that provides pediatric care to residents of the Abbottsford Homes Health Care Center, a public housing development with more than 3,000 residents.
- Fourth-year medical students who choose a pediatrics selective course may work as part of a team treating cocaine addicted pregnant women and their children in a program developed by pediatrics and psychiatry faculty.
- All third-year internal medicine residents complete a three-week mandatory rotation in infectious diseases at the City of Philadelphia Department of Public Health: Sexually Transmitted Disease Clinic. This site, which is under the medical direction of an on-site MCP attending physician, is located in central Philadelphia and has approximately 22,000 annual patient contacts.

MCP is in the process of redesigning its third-year curriculum to include an appropriate balance of ambulatory-based experience and the traditional inpatient clerkships. The school is also engaged in surveying student career preferences during each year of undergraduate medical education. Those interested in generalist areas are assigned an advisor from a generalist area. A new Department of Family Practice was recently established. A clerkship in family medicine as well as a six-year program leading to board certification in internal medicine, are under consideration.

For additional information contact: Leonard L. Ross, Ph.D., Dean, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pennsylvania 19129.

The **PENNSYLVANIA STATE UNIVERSITY COLLEGE OF MEDICINE** has a variety of programs and activities that introduce students to the roles and responsibilities of the generalist fields. The school has increased its entering class size to 110 students per year. During 1992, a Problem-Based Learning (PBL) track was implemeted for 26 volunteering second-year students. This track provides small-group, case-based learning.

The Department of Family and Community Medicine sponsors a required first-year course on the doctor-patient relationship and a required third-year clerkship, as well as offering a series of elective clerkships and courses in community medicine, health promotion, sports medicine, and geriatrics. The Department also sponsors a very active Family Practice Interest Group. An elective one- to four-week Primary Care Preceptorship for first-, second-, and fourth-year students is jointly sponsored by the departments of family medicine, medicine, and pediatrics. More than 250 generalist practitioners serve as preceptors in this program.

The Division of General Internal Medicine's activities include: a journal club, an ongoing conference seminar series on ambulatory and primary care topics, and continuing medical education courses for local physicians. The Division also sponsors an Internal Medicine Interest Group for medical students and offers an elective, Observing the Clinical Process, for first-year students.

For 10 years the Division of General Pediatrics has conducted a Primary Care Training Program in general pediatrics. This program uses a "dual site" continuity clinic program that provides all second- and third-year residents with two half-day continuity clinics per week, one at the University Hospital and the other at a community hospital.

As a recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant, Pennsylvania State University College of Medicine will enact several innovative strategies over the next few years. These strategies are designed to attain the goal of having 50% of their graduating students entering primary care training programs.

PROPOSED

RECRUITMENT & ADMISSION INITIATIVES:

- ❑ A Generalist Advisory Program will use recruitment teams composed of primary care faculty and students to visit colleges and high schools to inform students about the generalist curriculum. A "Generalist Career Day" will be held each year at the medical school for interested students.
- ❑ Undergraduates will be able to complete pre-medicine elective courses and practicum experiences by attending a summer program at the medical school.
- ❑ A program will be developed to provide early acceptance or admission for exceptional students. These students will have the option of completing four years at their undergraduate school or entering medical school at the end of their third year of college. Upon successful completion of the first year of medical school they will receive a baccalaureate degree from their undergraduate institution.
- ❑ The admission committee will be reorganized to include two subcommittees, chaired by primary care faculty, each responsible for admitting 50% of the students to the first-year class. Core generalist faculty will make up the majority of the membership of each of these committees. All students who identify generalist medicine as a potential career will be interviewed by the core generalist faculty. At least 50% of the class will be filled by the students ranked most highly by the generalist subcommittee.

PROPOSED

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Students will have four required generalist-based courses in the first and second years:
  1) Primary Care Preceptorship, which allows students to spend one week during the first year visiting the office of a generalist physician;
  2) Clinical Issues in Primary Care, a year long longitudinal course, which includes a preceptorship experience in a community site for one half-day per week;
  3) The Doctor-Patient Relationship, which explores the elements of the patient-physician interaction; and
  4) Physical Diagnosis which will provide students with additional patient contact.
- ❑ The four-week required third-year clinical clerkships in family and community medicine, and core clerkships in medicine, pediatrics, obstetrics/gynecology, and psychiatry will offer expanded primary care experiences.
- ❑ All fourth-year students will be required to complete a four-week generalist clerkship in a community setting providing medical care to an underserved area or an underserved population.
- ❑ A special elective curriculum will be organized for fourth-year students who have chosen to enter a primary care residency.
- ❑ Throughout the four years, students will be able to participate in an elective Generalist Medicine Enrichment Program. Students who complete this program receive special

PENNSYLVANIA *continues on next page*

recognition and consideration when applying for admission to the Pennsylvania State-Hershey program and other cooperating generalist residency programs.

PROPOSED:

RESIDENCY TRAINING INITIATIVES:

- ❑ The core generalist faculty in the Center for Primary Care Medicine will develop a core curriculum for primary care residents that will include at least 25% time in ambulatory medicine, longitudinal mentoring by generalist faculty, primary care seminars and case conferences, and mandatory experience in community health centers.
- ❑ An early-start residency track will allow students to begin a generalist residency program during the fourth year of medical school. Tuition will be waived for these students, and they will be eligible for either a stipend or low interest loans for this six-month period. The sites participating in the early residency program are the Pennsylvania State University Family Medicine Residency Training Programs (Harrisburg Hospital in Harrisburg and the Good Samaritan Hospital in Lebanon), and the residency training programs in pediatrics and medicine at the college of medicine in Hershey. Residents in these programs will be required to spend at least two months during the second or third year working with a generalist physician in an underserved area.

PROPOSED:

PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Develop a Practice Support Outreach Program to encourage and support generalist physicians to practice in underserved areas within the state. Some of the support options to be provided include: continuing medical education, consultation services, mini-fellowships for clinical skill development at the college of medicine, and regional patient education programs.
- ❑ Work with community hospitals, payers, and government to allow rural hospitals to serve as central hubs for physicians in surrounding communities who share call, information resources, and support systems.
- ❑ Develop systems of informatics and continuing medical education that will allow electronic transfer of information from academic conferences, libraries, and other sources directly to the rural physicians.

For additional information contact: C. McCollister Evarts, M.D., Dean of the College of Medicine and Senior Vice President for Health Affairs, Pennsylvania State University College of Medicine, 500 University Drive, P.O. Box 850, Hershey, Pennsylvania 17033.

The **UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE**, in order to eliminate financial deterrents preventing students from choosing primary care or research careers, has established a free tuition fund. The fund will be used to underwrite students choosing lower paid fields, including family practice.

As of 1993 all students who enter the third stage of the medical school curriculum are required to participate in a four-week series of learning experiences in primary care. These experiences include carefully planned preceptorships in family practice, general pediatrics and general internal medicine. The students will spend nearly one-half of their time in planned workshops designed to enhance their communication, health care assessment, health maintenance, and informatics skills as applicable to the provision of primary care.

For additional information contact: M. William Schwartz, M.D., Associate Dean for Primary Care, University of Pennsylvania School of Medicine, Suite 100 Stemmler Hall, 36th & Hamilton Walk, Philadelphia, Pennsylvania 19104.

The **UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE** admission committee gives special consideration to rural western Pennsylvania applicants who wish to return to those areas to practice. The medical school is concentrating on forming stronger links with its regional campuses to encourage and direct qualified applicants from these campuses into medicine. Faculty members from the Departments of Clinical Epidemiology and Family Medicine will be taking a greater role in interviewing candidates for admission.

Based on the premise that students will become more interested in primary care if they are exposed early in medical school to the community-based, ambulatory, and primary care-based practice of medicine, the school initiated a new curriculum with the 1992 entering class.

All students now spend their first two weeks of medical school in an interdisciplinary course, the Patient-Doctor Relationship. The course uses a small-group setting and a problem-based format, where students consider issues that greatly influence how patients and physicians interact. This course continues throughout the first year as Society and the Physician.

Students spend one afternoon each week, starting in January of the first year and continuing throughout the second year, in ambulatory patient-care settings. Previously, students had no contact with patients until Physical Diagnosis late in the second year of medical school.

During years three and four, an increased amount of training will occur at ambulatory sites. Some training, which previously occurred in the operating room, has been moved to ambulatory settings. A mandatory three- to four-week family medicine rotation has been added, as well as a six- to eight-week ambulatory subspecialty course. The ambulatory subspecialty course replaces four weeks currently assigned to subspecialties and shifts the emphasis to the ambulatory setting.

For additional information contact: Diane Moore, Assistant to the Dean, University of Pittsburgh, School of Medicine, Office of the Dean, M240 Scaife Hall, Pittsburgh, Pennsylvania 15261.

Of the **TEMPLE UNIVERSITY SCHOOL OF MEDICINE** graduating class of 1993, 48% are entering either family practice, internal medicine, or pediatric residencies. Admission criteria have been altered to give special attention to applicants with a high likelihood for entering primary care practice. For over 10 years, clinically-oriented teaching in the first two years has been directed by faculty members in the Department of Family Practice.

During 1990, the school formed the Primary Care Institute (PCI). The institute has four major goals: to foster high quality primary care teaching, to provide primary care faculty development, to stimulate medical student interest in and commitment to primary care, and to conduct research in primary care. The PCI has assumed increasing responsibility for curricular offerings in the first two years of medical school and has introduced a new course: Fundamentals of Clinical Care. This course provides early patient contact in primary care practitioner's offices in Philadelphia and its surrounding communities. Standardized patients are being used to assist students in developing interviewing skills. The Physical Diagnosis course has been revised to increase the amount of exposure received in ambulatory settings.

Family practice has long been a required third-year clinical clerkship, based primarily in ambulatory settings. It has recently been reorganized to include additional activities associated with family practice residency programs. The basic required clerkship in internal medicine has been altered to include off-site experiences in general internal medicine

PENNSYLVANIA *continues on next page*

practitioners' offices. The required pediatrics clerkship provides 50% of its training at ambulatory-based sites.

For additional information contact: Allan R. Myers, M.D., Dean, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pennsylvania 19140.

PUERTO RICO

The major objective of the **UNIVERSIDAD CENTRAL DEL CARIBE SCHOOL OF MEDICINE** is to educate and train primary health care physicians. From 1986 through 1991, 60% of the school's graduates selected family medicine, internal medicine, or pediatric residencies.

A family medicine clerkship is required for all third-year medical students. The clerkship is an ambulatory rotation utilizing public and private family medicine centers, in both urban and rural settings. Students also have required third-year clerkships in internal medicine and pediatrics. A community health research project is required of all students in the fourth year.

During 1991 the school became accredited to offer a family medicine residency program.

Julia Bonilla, M.D., a family physician, was appointed to the position of Dean of Clinical Affairs, during 1993. Dr. Bonilla has initiated the process of reviewing the school's curriculum as it relates to primary care medicine.

The school plans to participate in the federally funded Primary Care Loan program, which requires students to practice in primary care in order to receive favorable repayment terms. In order to comply with the loan program's requirements, the school will take further initiatives to create primary care opportunities for students.

For additional information contact: Raúl A. Marcial-Rojas, M.D., J.D., President Dean, Universidad Central del Caribe School of Medicine, Call Box 60-327, Bayamon, Puerto Rico 00960-6032.

RHODE ISLAND

BROWN UNIVERSITY SCHOOL OF MEDICINE has a long-standing primary care educational program. Its Program in Medical Liberal Education (PLME) combines a four-year college degree program with flexible academic requirements with a four-year medical program. Students apply to the PLME from high school and may pursue wide ranging intellectual interests as college undergraduates without jeopardizing admission to medical school.

An Affinity Group program, a four-year longitudinal small-group mentorship and problem-based learning program, provides a supportive connection between college and the medical program, beginning in the junior year of college. Many of the affinity groups are generalist oriented and pursue experiences in primary care and community activities.

In the first year of medical school (year five of the program), students begin to learn interviewing skills with patients. Many preclinical courses are taught in problem-based learning format, with clinical problems providing the background for basic science learning.

All third-year students are required to take a six-week Community Health clerkship combining ambulatory clinical experiences, predominatly generalist, with course work. During

the third and fourth years of medical school, a six-month longitudinal clerkship is required. The clerkship requires the student to spend one half-day weekly in a practitioner's office. Family medicine electives are available in both inner-city and rural health care centers.

Brown's family medicine residency at Memorial Hospital has a partnership with a community health center in Pawtucket, Rhode Island. One-third of the residents receive all their training in continuity clinics. The general medicine internship at Rhode Island Hospital and a newly established general medicine residency at Memorial Hospital provide residencies in internal medicine with substantially increased time in ambulatory generalist sites.

For additional information contact: Robert S. Northrup, M.D., Director of the Primary Care Initiative, Brown University School of Medicine, Box G, Providence, Rhode Island 02912.

SOUTH CAROLINA

The MEDICAL UNIVERSITY OF SOUTH CAROLINA COLLEGE OF MEDICINE offers a number of activities designed to stimulate interest and enhance educational opportunities for students considering a generalist career.

Recognizing that candidate selection has an impact upon career choice, the admission committee searches for students who emulate the qualities of the "family doctor".

Three senior medical students now participate in an accelerated program that combines the final year of medical school with a newly structured residency in the Department of Family Medicine.

The college is planning for a new ambulatory care facility. The center will provide an improved environment for ambulatory care and offer opportunities for students and residents in all clinical disciplines to learn modern day ambulatory care.

A family medicine junior core assignment provides students with an opportunity to learn about community medicine by participating in a required four-week assignment in the family medicine centers of the six hospitals that comprise the South Carolina Area Health Education Consortium (SC AHEC).

The main purposes of the AHEC are to promote primary care and to retain physicians in the state. Both the Medical University of South Carolina and the University of South Carolina use the AHEC hospitals for off-campus clinical electives. In 1991 there were 173 residents in family medicine residencies sponsored by the consortium hospitals.

In cooperation with the colleges of medicine at MUSC and USC, the AHEC is developing rural primary care centers at Hampton and Fairfield counties. These will serve as training sites for students and as models for primary health care delivery in rural areas.

The Medical College's Office of Continuing Medical Education is addressing the problem of professional isolation, which has been identified as a deterrent to practicing in a rural community, through the following initiatives: 1) clinical faculty provide lectures on topics requested by physicians at hospitals and county medical societies; 2) a monthly video-conference is broadcast over the Health Communications Network (HCN) to 52 hospitals and other health related institutions in the state; and 3) a personalized fellowship program is being developed to provide physicians refresher courses and clinical updates on campus.

For additional information contact: Victor E. Del Bene, M.D., Associate Dean for Students, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425-2201.

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Since its beginning in 1977, the **UNIVERSITY OF SOUTH CAROLINA SCHOOL OF MEDICINE** has graduated 563 physicians, 298 of whom have completed residencies and are now in practice. Of these 298, 48% (143) are practicing family medicine, general internal medicine, or general pediatrics.

The school's admission committee pays special attention to applicants from rural parts of South Carolina who express an interest in entering a primary care field.

Recent curricular changes in the preclinical years have enhanced the school's long-standing emphasis on topics important to the practice of primary care medicine. The four-semester Introduction to Clinical Practice continuum, which replaces 12 previously separate clinically relevant courses, stresses small-group interaction, the physician-patient relationship, and the biopsychosocial model of medical care. Twenty-four weeks of family medicine, general internal medicine, and general pediatrics are required in the third year. In the fourth year, family practice electives are available, along with another eight-week required general internal medicine clerkship.

The school recently initiated the Rural Primary Care Education Project in Winnsboro, South Carolina. This model rural primary care practice serves a community in need of health care and provides a primary training site for nearly 100 graduate-level students from the school of medicine as well as for students from the University of South Carolina's colleges of nursing, pharmacy, public health, and social work. All third-year medical students receive training at the site.

The medical school is committed to maintaining primary care physicians in underserved areas and is developing programs to meet this goal. The Department of Pediatrics' South Carolina Access Network provides affordable *locum tenens* coverage to rural pediatricians in solo practice. The school of medicine library has completed a pilot project linking physicians distant from medical library resources to the National Library of Medicine by means of the computer.

The medical school also participates in the South Carolina Legislature's Rural Physicians Incentive Program that provides four years of financial support to generalist physicians who enter practice in underserved areas of the state. The South Carolina Area Health Education Consortium has obtained a federal grant that allows the repayment of student loans up to $80,000 for physicians entering primary care practice in federally designated underserved areas.

For additional information contact: J. O'Neal Humphries, M.D., Dean, School of Medicine, University of South Carolina, Columbia, South Carolina 29208.

SOUTH DAKOTA

The **UNIVERSITY OF SOUTH DAKOTA SCHOOL OF MEDICINE** provides third-year students with the option of selecting a student-centered, problem-based learning, continuity care experience in an ambulatory setting. The program began in June 1991 with 10 students electing to spend their third year at the Yankton campus. The ambulatory site for the clerkship is the Yankton Medical Clinic. A unique feature of this program is the integration of the six specialty clerkships (family practice, internal medicine, pediatrics, surgery, psychiatry, and obstetrics/gynecology) into a continuous year-long clerkship.

The student is able to determine the method and pace at which the objectives of the clerkship are met, with guidance from faculty. Students must also complete a community project during the course of the clerkship. A detailed description of this clerkship is provided in the *South Dakota Journal of Medicine* 45 (April 1992):103-107 and *Academic Medicine* 67(December 1992):817-819.

For additional information contact: Robert C. Talley, M.D., Vice President for Health Affairs, Dean, University of South Dakota School of Medicine, 2501 West 22nd Street, Sioux Falls, South Dakota 57117-5046.

TENNESSEE

The EAST TENNESSEE STATE UNIVERSITY JAMES H. QUILLEN COLLEGE OF MEDICINE accentuates primary care concerns in recruitment, admission, curriculum, and graduate medical education. Of the college's graduates of the classes of 1982 through 1988 (315), 138 (43.8%) are in family medicine, general internal medicine, or general pediatrics.

During 1992, its first year, 25% of the entering class chose the Rural Primary Care Track (RPCT). This rural track is sponsored by the W. K. Kellogg Foundation and is designed so that students receive a major portion of their education in a rural community setting. RPCT students learn communication skills, physical diagnosis, preventive medicine, public health, and epidemiology by devoting one day a week to these activities in a rural area. The longitudinal (two to three years) training component will be interdisciplinary, involving students and faculty from family medicine, nursing, and public health.

Within the standard curriculum, courses that emphasize primary care are offered: 1) Freshman Grand Rounds is directed and presented by family practitioners; 2) Introduction to Clinical Medicine is directed by a family practitioner with faculty assistance from general internists; 3) Physical Diagnosis is taught by a general internist; 4) an eight-week junior clerkship in family medicine is required; and 5) all seniors take an eight-week generalist subinternship sponsored by internal medicine.

For additional information contact: Charles L. Votaw, M.D., Ph.D., Executive Associate Dean, Academic Affairs, East Tennessee State University, James H. Quillen College of Medicine, Box 70571, Johnson City, Tennessee 37614-0571.

MEHARRY MEDICAL COLLEGE SCHOOL OF MEDICINE has several major efforts underway to recruit students into careers in family medicine. The Area Health Education Centers (AHECs) of Tennessee, based at Meharry, conduct health career day activities for elementary, middle, and high school students in 82 Tennessee counties. The Program Director and the residents of the Meharry Family Practice Residency Program participate at career day activities and share information about careers in family practice.

The medical school sponsors a number of community forums and activities to emphasize primary/preventive health issues including: Health and the Black Family, Health and the Black Male, Health and the Minority Patient, and Human Sexuality and Sexually Transmitted Diseases.

The Family Practice Residency Director works with the admission committee in identifying applicants with an interest in primary care. Students who indicate an early interest

TENNESSEE *continues on next page*

are encouraged to join the Family Practice Club in year one and are aided throughout their career in any activity that increases their interest in primary care.

In Family Health Behavior, a small-group lecture series offered in the first year of medical school, students are introduced to the role of the family physician. In the second year, family physicians participate in the Introduction to Clinical Medicine course by giving lectures and serving as preceptors. The third-year required clerkship features four weeks in community medicine and four weeks in family medicine where students work with a family physician in a private office.

A grant awarded in 1993 by the United States Department of Health and Human Services will allow the school to enhance their third-year clerkship by sending students to rural areas to work with family physicians. These students will also work within the communities to stimulate interest in health careers and serve as role models.

The family practice residency program has also received a Department of Health and Human Services grant to enhance residency training through the establishment of a new center based on the community oriented primary care model. The center will also be used as a site for the third-year family practice clerkship.

For additional information contact: Harold V. Nevels, M.D., Director, Meharry Family Practice Residency, Meharry Medical College School of Medicine, 1005 D. B. Todd Jr. Boulevard, Nashville, Tennessee 37208.

The UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE funds 15 students per class from the state of Tennessee for the designated Underserved Areas Grant Program. There is ongoing activity to identify site specific grants up to $15,000 per student per year for individuals contracting to return to those designated areas. Other non-site specific $10,000 grants are available for students contracting to go to any designated underserved area. All grants provide for tuition, fees and stipends. To qualify graduates must go into family medicine, general internal medicine, pediatrics or medicine/pediatrics practice in an underserved area in the state and serve one year for each year of grant support received.

To assist in identifying individuals who might go into generalist careers, the college has appointed a Generalist Physician Subcommittee of the Committee on Admission.

Other initiatives being planned include a modification in the undergraduate curriculum designed to incorporate a generalist track for all four years of medical school and the development of summer preceptorships.

For additional information contact: Hershel P. Wall, M.D., Associate Dean for Admissions and Students, University of Tennessee, Memphis, College of Medicine, 800 Madison Avenue, Memphis, Tennessee 38163.

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE recently commissioned a special task force, the Generalist Physician Education Committee, to review the primary care experiences of students and make recommendations to enhance these experiences. A number of activities and programs designed to increase student awareness of the role of generalist physicians are in place.

During the first two years of medical school, students take electives for three half days each week. Elective courses that introduce topics relevant to generalist practice include: 1) Adolescent Substance Abuse, which allows medical students to educate grade school students to the hazards of drugs and alcohol; 2) Physical Assessment, which prepares participating students for a summer internship with the Student Health Coalition in

Appalachia; 3) Rural Pediatrics and Public Health, which includes visits to rural areas to participate in providing health care to children in clinic and home settings; and 4) Introduction to Comprehensive Medical Care, which involves a home visit and assignment to community-based services. A rural family medicine clerkship elective is also available to second-year students. Other electives address national health care issues, ethics, the doctor-patient relationship, substance abuse, health promotion and disease prevention, and social and cultural issues. The Department of Pediatrics and the Amos Christie Pediatric Alumni Association provide four summer fellowships for students who have completed their first or second years.

One-third of the attending physicians with whom students have contact on the 10-week, third-year medicine clerkship and the 8-week pediatrics clerkship are from the Divisions of General Medicine or General Pediatrics. The Department of Pediatrics uses community physicians, along with full-time faculty, as co-attendings on all inpatient ward teams so that students are exposed to the perspective of a community generalist during these rotations. The medicine clerkship provides students with a similar exposure to clinical faculty.

A four-week ambulatory experience is required of all fourth-year students. The small group didactic portion addresses psychosocial, legal, ethical, and economic issues relating to health care practice. The clinical experience may be in either general medicine, general pediatrics, or emergency medicine.

CURRENT

RESIDENCY TRAINING INITIATIVES:

- ❑ The Division of General Internal Medicine has developed a special practice model to instruct residents in ambulatory general medical care. With support from the Robert Wood Johnson Foundation, this continuity experience takes place in the physician offices of the general medicine faculty in the new Vanderbilt Clinic. These offices were designed for outpatient training and practice.
- ❑ Pediatric residents are trained and see their own patients in a pediatric continuity clinic, the Vanderbilt Pediatric Group Practice. Attending coverage is provided by faculty members of the Division of General Pediatrics. Other faculty also provide clinic coverage in order to assure continuity of contact with residents over the three-year residency program.

CURRENT

PRACTICE ENTRY AND SUPPORT INITIATIVES:

- ❑ The school of medicine provides continuing educational support to practicing generalists through sponsorship of an annual Family Medicine/Primary Care Update Program. This event allows practicing physicians to review and update their knowledge in various fields of medicine.
- ❑ Collaborative Office Rounds, a continuing education activity, allows a group of 12 community pediatricians to address psychiatric problems found in general pediatric practice.
- ❑ A major goal of the Department of Pediatrics' General Pediatric Referral Clinic is to teach residents and students to solve complex problems in general pediatric practice without seeking advice unnecessarily from consultants. This clinic serves as an interface between family practitioners, general practitioners, and pediatricians, in middle Tennessee and surrounding states, and specialists available in the Vanderbilt University Medical Center. Patients are seen at the clinic, specialist referrals are made only as necessary, and the patient is referred back to the community physician with recommendations and treatment plans. Interns and fourth-year students also participate in this clinic.

For additional information contact: John E. Chapman, M.D., Dean, Vanderbilt University School of Medicine, 21st Avenue South at Garland Avenue, Nashville, Tennessee 37232.

TEXAS

Approximately 30% of the 1987 graduates of the **TEXAS A & M UNIVERSITY HEALTH SCIENCE CENTER COLLEGE OF MEDICINE** are practicing in either family medicine, internal medicine, or pediatrics.

The admission committee is currently reviewing its administrative policies and procedures to determine the feasibility of incorporating selective admission criteria for students likely to choose generalist careers.

Two required first-year courses are sponsored by the Department of Family and Community Medicine. Working with Patients introduces students to basic medical history and communication skills. The Introduction to Physical Diagnosis course is taught jointly with the Department of Internal Medicine and teaches history-taking, physical examination, and interviewing skills.

Second-year students have a required preceptorship in primary care medicine. One afternoon each week is spent in a practicing physician's office. Third-year requirements include a 6-week family and community medicine clerkship and a 12-week core clerkship in internal medicine. Family practice electives are available in the fourth year.

A state-funded Physician Education Loan Repayment Program is available to qualified graduates. Upon completion of a residency in family medicine, pediatrics, internal medicine, or obstetrics/gynecology, up to $18,000 per year of educational loans will be repaid if the physician practices in a designated area of Texas.

For additional information contact: Richard A. De Vaul, M.D., Dean and Vice President for Health Affairs, Texas A&M Health Science Center, 147 Joe H. Reynolds Medical Building, College Station, Texas 77843.

The **TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER SCHOOL OF MEDICINE** is increasing the number of ambulatory experiences in hospital and community settings for students and residents.

A pilot program is being developed on the El Paso campus, with a community-based curriculum designed to furnish an appreciable portion of students' education in the community and to provide experience in the lifestyle of practice in a small community. Texas Tech University's Regional Academic Health Science Center in El Paso, in conjunction with the University of Texas at El Paso, has established the El Paso Institute for Community Health. The program will create academic, primary health centers with outreach to schools, community health centers, and county/state health department services. Nearly 30% of the Texas Tech clinical curriculum will be based in the new county community health center and the related sites. All current Texas Tech medical students will have expanded opportunities for community-based educational experiences. The new medical curriculum will emphasize an interdisciplinary, non-hospital, primary health care approach.

A program to encourage small communities to contribute to a scholarship base to ease the debt load of students interested in primary care is underway. For the past two years the school has offered recruitment allowances of $2,500 to students who agree to complete primary care residencies at the Lubbock campus.

Several activities have been implemented by the Department of Family Medicine at the predoctoral level, including: 1) The family practice preceptorship, available to first- and second- year students, provides subsidies to medical students to experience rural family practice with preceptors throughout the state. 2) A family practice mentorship program pairs

interested first- and second- year students with faculty members and practicing family physicians to observe clinical practice on an individual basis. 3) All third-year students spend two weeks of their six-week clerkship in the office of a family physician. 4) A fourth-year subinternship in family practice and outpatient selective are available. 5) A four-week senior preceptorship is available as an elective rotation, allowing students to choose to work with physicians in rural, urban, or suburban areas. The preceptorships are arranged through the Texas Statewide Preceptorship Program. The program maintains a pool of available family physicians that students may choose from and administers the matching of students with the physicians.

Among the Department of Family Medicine's initiatives at the residency level is the development of a rural health curriculum track designed to provide residents with skills needed for practicing in a rural area of Texas.

The Department of Pediatrics offers several courses and activities designed to educate students about primary pediatric care: 1) Introduction to Child Health Care, which is a first-year elective; 2) in the second year, students begin to have hands-on experience with taking histories and examining children as part of Introduction to Patient Assessment and Pediatric Patient Encounters; 3) seniors have an opportunity to take a clerkship that focuses on specialties within clinical settings; 4) subinternships and senior electives are also offered in pediatrics; 5) the Pediatric Club meets once-a-month and allows pediatricians to talk to students about primary pediatric care; and 6) each pediatric resident participates in a weekly Continuity of Care Clinic. Since 1986, Texas Tech has graduated 26 pediatric residents. Of these, 16 went into general pediatric practice.

For additional information contact: James A. Chappell, M. D., Associate Dean for Academic Affairs, Texas Tech University Health Science Center School of Medicine, Office of Admissions and Student Affairs, Lubbock, Texas 79430.

The UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS SOUTHWESTERN MEDICAL SCHOOL introduces students to generalist physician role models beginning in the first year of medical school. A videotape highlighting primary care is being developed under the direction of the Chairman of Family Practice. The video will be shown to all entering students. Many community and generalist physician faculty participate in small group teaching in the first-year ethics course.

The second-year Introduction to Clinical Medicine course is directed by general internal medicine faculty. Family practice and general pediatrics faculty also participate in the course which uses standardized patients and problem-based learning for teaching and assessing students. Plans are underway for a patient-doctor course that will span the first two years and emphasize the skills, knowledge, and attitudes required for generalist practice.

The third-year required clerkships include four weeks in family practice and eight weeks in pediatrics (four of which are ambulatory and two of which are in community physicians' offices). Beginning in July 1993, internal medicine will add an ambulatory rotation as an option for one of its required months in the fourth year.

For additional information contact: William B. Neaves, Ph.D., Dean, UT Southwestern Medical Center at Dallas Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.

TEXAS *continues on next page*

Providing primary care education has long been a priority for the **UNIVERSITY OF TEXAS MEDICAL BRANCH (UTMB) AT GALVESTON**. The goals of the medical school curriculum support the training of community-oriented generalist physicians. Approximately 30% of the school's graduates from 1987 are currently practicing in the generalist specialties.

The preclinical courses: Introduction to Patient Evaluation, Medical Ethics, and Introduction to Clinical Medicine are interdisciplinary and clinically integrated. Standardized patients and performance-based clinical skills examinations are currently used as teaching and evaluation tools in several first-year courses as well as in the required clerkships in internal medicine and family medicine. For students between the first and second years of medical school, the Department of Family Medicine offers a preceptorship. Sponsored by the Texas Academy of Family Physicians, the one-month elective offers students a chance to gain early clinical experience in the office of a practicing physician. The third-year required family medicine clerkship allows students to select from four training sites: Galveston, Port Arthur, Austin, and Odessa. In each location students spend half their time in a family practice residency teaching practice and half in the office of a private family physician. The Department of Internal Medicine is in the process of hiring three new generalist faculty members. The department will also offer a new community-based block rotation in conjunction with the East Texas Area Health Education Center.

UTMB was recently awarded an AHEC grant that will allow for the creation of four regional centers in La Marque, Nacogdoches, Tyler, and Victoria. The first center in La Marque is being used as a training site for students participating in the required third-year clerkship. A family practice residency training practice has also been established.

As a recipient of a Robert Wood Johnson Foundation Generalist Physician Initiative Grant, the medical school plans to enact programs to increase to 50% entering medical students who designate generalist medicine as their first career choice. Admission criteria, undergraduate curriculum, residency training, and faculty practice will be affected by the proposed initiatives.

PROPOSED
RECRUITMENT & ADMISSION INITIATIVES:

- ❑ A network of student advisors in rural high schools and colleges will be put in place to help recruit students into generalist careers.
- ❑ The school's admission policies will be changed to encourage the admission of those students most likely to choose generalist career paths.

PROPOSED
UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ Students will begin their medical school education with a two-week orientation facilitated by generalist physician faculty members.
- ❑ Introduction to Physician Examination, Introduction to Clinical Medicine, and Preventive Medicine courses will be integrated and will include a longitudinal clinical experience.
- ❑ The Summer Honors Program for medical students will be expanded to include two positions designated for primary care research.
- ❑ A new, integrated, interdisciplinary generalist ambulatory third-year clerkship will be developed. The clerkship will combine four weeks from the current internal medicine clerkship, four weeks from the pediatrics clerkship, plus all four weeks of the existing family medicine clerkship. The curricula of third-year clerkships in the other medical specialties will be modified to be more generalist-oriented.
- ❑ A primary care selective track for senior medical students interested in generalist careers will be developed.

PROPOSED:
RESIDENCY TRAINING INITIATIVES:

- ❑ A core curriculum for primary care residents in content areas essential for generalist physicians will be developed.
- ❑ The variety of the ambulatory clinical experiences available to pediatric, family medicine and internal medicine residents will be increased.
- ❑ A series of coordinated, generalist-oriented, two- to four-week specialty rotations will be created for generalist residents.
- ❑ The Department of Family Medicine plans to modify its existing residency training program to a non-rotational approach. Residents will spend the bulk of their second and third year of training providing continuous care to a panel of patients in the model residency teaching practice setting, with intermittent brief specialty block rotations.

PROPOSED:
PRACTICE ENTRY & SUPPORT INITIATIVES:

- ❑ Primary care and associated research faculty with expertise in the core scientific disciplines will be created through development of current faculty and recruitment of new faculty.

For additional information contact: George T. Bryan, M.D., Dean of Medicine, UT Medical School at Galveston, 301 University Boulevard, Galveston, Texas 77550.

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON Primary Care Task Force has proposed comprehensive changes in several areas including: admission criteria, curriculum, faculty development, interface with the School of Public Health, and funding. Curriculum recommendations include: establishment of a primary care track for students, establishment of primary care fellowships, and increased emphasis on clinical epidemiology. The school recently appointed a special advisor and coordinator for Primary Care Initiatives.

Currently, the admission committee has a subcommittee that focuses on applicants from rural areas. Primary care is the theme of the first-year orientation. Students have a required four-week third-year clerkship in family practice and community medicine. Preceptors for the clerkship are located throughout Texas.

For additional information contact: John C. Riddle, M.D., Dean, University of Texas Medical School at Houston, 6431 Fannin, Suite G.010, P.O. Box 20708, Houston, Texas 77225.

UTAH

UNIVERSITY OF UTAH SCHOOL OF MEDICINE students are eligible for state funded educational scholarships to train for medical practice in underserved rural areas of the state. To qualify, applicants must exhibit a strong commitment to rural health care, be accepted to an accredited allopathic or osteopathic medical school, commit to serve in a rural underserved area of Utah upon completion of a postgraduate training program in either family practice,

UTAH *continues on next page*

internal medicine, pediatrics, or obstetrics/gynecology, and exhibit strong academic performance in undergraduate studies. Participating students receive $10,000 per year and agree to practice one year for each year of scholarship received.

For additional information contact: Bob Quinn, Utah Department of Health, Bureau of Primary Care and Rural Health Systems, P.O. Box 16990, Salt Lake City, Utah 84116-0990.

VERMONT

Nearly 34% of the 1987 graduates of the **UNIVERSITY OF VERMONT COLLEGE OF MEDICINE** are practicing in either family practice, internal medicine, or pediatrics. The school's current curriculum offers a variety of opportunities to facilitate the students' choice of a generalist career.

The college of medicine divides the curriculum into three parts: a basic science core (one and a half years); a clinical core (one year); and a senior selective program (one and a half years).

During the basic science core, several courses relevant to primary care are offered. A basic clerkship directed by the Department of Family Medicine provides early exposure to primary care. Students can also take a family medicine elective that provides an opportunity to observe and learn in the office of a practicing family physician. In addition, summer clinical electives allow students to work with a practicing physician for a minimum of two weeks during the summer after the first year of the basic science core.

In the clinical core, pediatrics has a required one-month rotation in an ambulatory setting. Ambulatory experiences are also included in rotations in medicine, surgery, psychiatry, and obstetrics/gynecology. A family practice preceptorship and a community preceptorship are required rotations in the senior selective program. The first provides students with a month-long experience in a family practice setting. The second preceptorship rotation is taken at a community site away from the academic medical center.

The University of Vermont School of Medicine recognizes that stronger measures must be taken to meet the future need for primary care physicians. Their goal is to have 50% of the total class select generalist careers.

Plans are underway to enact strategies that will enhance students' exposure to the generalist fields. These include adding a required one-month family practice rotation to the clinical core and expanding opportunities for outpatient internal medicine experiences.

For additional information contact: John W. Frymoyer, M.D., Interim Dean, The University of Vermont, College of Medicine, Office of the Dean, Given Building, Burlington, Vermont 05405-2150.

VIRGINIA

The **MEDICAL COLLEGE OF VIRGINIA/VIRGINIA COMMONWEALTH UNIVERSITY (MCV/VCU)** provides students with primary patient care experiences beginning in the first year of medical school. Following a series of small-group discussions on interviewing skills offered in the spring semester,, each student spends one week in a primary care physician's office working closely in a mentor relationship. One hundred sixty-eight alumni and adjunct faculty throughout the state participate.

In the third year, there is a required one-month rotation in a community practice setting. This rotation can occur at MCV/VCU family practice residency programs or at primary care practitioners' offices throughout the state. A multitude of primary care electives are offered to fourth-year students.

A limited number of primary care research opportunities are available during the summer for first- and second-year students. In the fourth year students may choose to participate in on-going and new research projects in the family practice department.

MCV/VCU has the largest family practice residency program in the state of Virginia with 36 positions annually. Residencies in general pediatrics and general medicine are also available.

There are currently seven $10,000 scholarships funded by the state for students who agree to serve one year as a generalist physician in a rural or underserved area in the state for each year of scholarship support.

For additional information contact: James M. Messmer, M.D., Associate Dean for Academic Affairs, Medical College of Virginia, Virginia Commonwealth University, School of Medicine, Dean's Office, Box 565, Richmond, Virginia 23298.

The **UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE** has committed itself to the goal of having 50% of its students pursuing primary care careers. To help reach this goal, an array of institutional initiatives are being implemented.

The school of medicine has established the University of Virginia Center for the Advancement of Generalist Medicine (UVACAGM). This administrative center coordinates and facilitates generalist activities within the medical school.

In addition, the University of Virginia is participating in a statewide effort with the Medical College of Virginia, Eastern Virginia Medical School, the Legislative Joint Commission on Health Care, and the statewide Area Health Education Centers to form the Virginia Center for the Advancement of Generalist Medicine (VCAGM). The VCAGM is located at the University of Virginia and is the coordinating center for statewide initiatives.

The school's admission procedures, policies, and criteria are being analyzed in order to assess potential areas for improvement. Ways to identify and recruit applicants from rural and other underserved areas within Virginia are also being studied. The UVACAGM will participate in a statewide study to identify individual attributes that characterize those individuals who are most likely to enter careers in primary care.

CURRENT
UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ A new first-year course, The Doctor, The Patient, The Illness, has been instituted to help students develop interviewing and communication skills. Medical histories, patient education and counseling, ethics in the patient-physician relationship, and small-group learning are emphasized.
- ❑ A new second-year primary care preceptorship allows students to spend one week working with a primary care physician practicing outside the medical school.
- ❑ An eight-week Department of Family Medicine elective is offered to a limited number of students during the summer prior to the first year or the summer between the first and second years. The elective includes seminars, patient interviews, preceptorial visits with practicing physicians, and correlative sessions relating basic science and clinical medicine to patients frequently seen in family practice. At the end of the elective, one week is allotted for the student to live at the home of a family physician and work in his/her office.

VIRGINIA *continued on next page*

- ❑ A new third-year clerkship in primary care ambulatory medicine will begin in the 1993-94 academic year. This clerkship will offer students a four-week clinical experience dealing with outpatient medicine.

PROPOSED

UNDERGRADUATE CURRICULUM INITIATIVES:

- ❑ A Generalist Scholars program, which will initially accept eight students per year, will be established as an educational track with specific curricular goals. The curriculum for this track will include the on-going six-week Family Practice Summer Course, which is offered in the summer prior to the first year and an expanded four-week fourth-year Disease Prevention and Health Promotion course.
- ❑ New courses for the track will include a one-month Socioeconomic Issues in Medicine course and a one-semester Clinical Epidemiology course during the second year.

The medical school is using funding from the Robert Wood Johnson Foundation Generalist Physician Initiative Grant to effect change in graduate medical education. The departments of family practice, general internal medicine, and general pediatrics are examining the feasibility of consolidating areas in the residency curriculum. The affiliated Internal Medicine Residency Program at Roanoke-Salem is planning to add a primary care track. The Department of Family Medicine will expand its residency positions from six to eight and will add a full-time faculty member to supervise students in the Family Practice Clinic. The department is also planning to place students at rural practice sites and at its affiliated residency programs in Lynchburg and Roanoke.

For additional information contact: Michael Morse, M.D., Coordinator, VCAGM, or Lisa K. Rollins, Ph.D., Administrator, UVACAGM, 141 Ednam Drive, Charlottesville, Virginia 22903.

WASHINGTON

The **UNIVERSITY OF WASHINGTON SCHOOL OF MEDICINE** has as its goal to have 55% of its graduates practicing in primary care. Nearly one-half of the school's graduates currently practice in primary care fields.

To achieve this goal, the school promotes the strengths of primary care disciplines, beginning with the admission process and continuing through residency training.

The school's WAMI program is formed around relationships established between the schools and universities, boards of higher education, and legislatures in the states of Washington, Alaska, Montana and Idaho and provides medical education for students from the four states. Primary care physicians from all four states make up the school's admission committee that concentrates on identifying applicants likely to go into a primary care discipline.

Family medicine faculty and primary care internists teach students Introduction to Clinical Medicine, a course providing instruction in interviewing and physical exam skills. This course is offered in the first year to provide early exposure to generalist role models. In the summer following the first year, students are encouraged, and paid a stipend, to participate in the Rural Underserved Opportunity Program preceptorship (RUOP). RUOP provides students with an opportunity to obtain hands-on clinical experiences with preceptors at either rural or urban underserved clinical sites.

During the second year, students can participate in the Community Health Awareness Program (CHAP), a medical student evening clinic providing care for an underserved urban population.

Third-year clerkships in medicine, pediatrics, family medicine, rehabilitation medicine, psychiatry, and obstetrics/gynecology are taught at 27 community clinics that emphasize primary care. The clinics are located in remote rural areas, and the medical school provides furnished housing and transportation costs for the students along with reimbursement to the teaching physicians.

For additional information contact: D. Daniel Hunt, M.D., Associate Dean for Academic Affairs, University of Washington School of Medicine, Seattle, Washington, 98195.

WEST VIRGINIA

Nearly 43% of the 1987 graduates of **MARSHALL UNIVERSITY SCHOOL OF MEDICINE** are practicing in primary care. An average of 27% of the school's graduates from the past three years have chosen to enter family practice residencies. The community-integrated school has from its inception in 1977 concentrated on the generalist specialties, starting with appropriate selections in the admission process and continuing with a four-year curriculum that offers numerous primary care opportunities.

Students receive significant exposure to rural primary care through a rural education network of private, federal, and community-owned practices throughout southwestern West Virginia.

During the preclinical years, the curriculum is "cross-referenced" to rural primary care. In addition to classroom correlations, first- and second-year students get rural field experience. One expanding program will, when fully implemented in 1994, assign rural mentors to these students and allow them to follow rural families and expectant mothers on a longitudinal basis through the first two years. Preclinical students may also participate in summer rural placements.

Third-year students' first clinical rotation is Introduction to Primary Care, an experience that provides two weeks alongside generalist physicians practicing in various regions throughout West Virginia. All third-year students participate in outreach teaching and service activities, most through Marshall's Partners in Prevention program. This program allows students to help rural physicians carry out community health activities.

Marshall also offers the Rural Physician Associate Program, which allows selected third-year students to spend nine months learning with a preceptor in a rural clinic. Students who choose this program have access to MEDLINE and other resources as well as faculty from Marshall.

All fourth-year students are required to spend four weeks in a non-urban West Virginia practice and complete four weeks of ambulatory care. An accelerated residency program allows selected fourth-year students to simultaneously serve their first year of residency.

The medical school's Combined Residency/Practice Program places residents in rural communities and provides a coordinated framework for interspersing years of full-time practice into a specially tailored family practice residency.

The school offers a fellowship program in rural family practice to help new physicians make the transition to generalist practice.

For additional information contact: Robert Walker, M.D., Associate Dean for Clinical Affairs, Chair, Department of Family and Community Health, Marshall University School of Medicine, 1801 Sixth Avenue, Huntington, West Virginia 25755-9000.

WEST VIRGINIA *continued on next page*

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE students learn about the demands and rewards of a generalist practice through the school's Visiting Clinician Program. Initiated in 1990, this program enables practicing rural physicians to come to campus once-a-month to study and to contribute to the school's academic programs. Students are also placed with these clinicians in the rural communities where they practice. Sixty clinicians, including family physicians, as well as physicians in pediatrics, internal medicine, emergency medicine, and obstetrics/gynecology participate. Nearly 100 medical students have spent one to two weeks with family physicians in West Virginia communities.

For additional information contact: Hilda R. Heady, Associate Vice President for Rural Health, West Virginia University Health Sciences Center, 1159 HSN, P.O. Box 9003, Morgantown, West Virginia 26506-9003.

West Virginia's seven state-funded health sciences schools (Marshall University's Schools of Medicine, and Nursing; WVU's Schools of Medicine, Nursing, Pharmacy, and Dentistry; and the West Virginia School of Osteopathic Medicine) have been the recipients of two grants, totalling $12 million, to implement curriculum changes.

1. A grant from the W. K. Kellogg Foundation enabled the schools to implement a new problem-based, multidisciplinary curriculum approach that places medical and allied health students in three rural communities for a major portion of their education. Preclinical courses at all institutions are being redesigned to support the strong emphasis on rural and primary care.

When fully operational, the percentage of each of the health profession's classes participating in the initiative will range from 30% in medicine to as high as 50% in graduate nursing. During 1992-93, two third-year medical students from each of the three universities will be placed at the sites.

During 1993-94, Marshall's regular curriculum will expand to include five preclinical courses on Appalachian culture, team decision-making, community health, rural research models, and health care economics.

One clinical track will allow selected third- and fourth-year medical students committed to primary care fields to spend three to six months in rural academic centers. Additional details regarding the Kellogg initiative can be found in *PrimeCare*. [Marshall University School of Medicine Alumni Magazine]. Spring-Summer 1992. pp. 16-18.

2. The 1991 West Virginia Rural Health Initiative (RHI) was enacted by the state government to increase the number of generalist physicians and primary care providers trained and retained in the state. The project created eight training networks in rural areas of West Virginia lead by a consortia of rural health care providers. The interdisciplinary curriculum developed by the Kellogg project is utilized by the RHI to allow the seven health sciences schools to offer students rotations of two weeks to fifteen weeks at more than 113 agencies, hospitals, behavioral medical centers, private practices, and primary-care clinics. Students may train and provide health care under the supervision of university faculty at these facilities. The program is initially working through existing preceptors located in rural areas. The goals for the initiative are to have all students rotating in these sites for at least one month by the end of the 1993-94 academic year and for at least three months by the end of the 1995-96 academic year. The Rural Health Initiative also calls for the creation of a *locum tenens* program as an effort to improve retention rates of primary care physicians in rural areas. For more information about the West Virginia Rural Health Initiative see the *West Virginia University Alumni Magazine*. Fall, 1992. pp. 2-3.

For additional information contact: Robert Walker, M.D., at Marshall University School of Medicine or Hilda R. Heady at West Virginia University School of Medicine. Their addresses are listed at the end of the previous entries.

WISCONSIN

The **MEDICAL COLLEGE OF WISCONSIN** has pursued three strategies for encouraging students to select generalist careers: 1) recruitment of students with an interest in primary care; 2) curricular reform; and 3) provision of financial incentives.

A new course, Profession of Medicine Program (POMP), has been developed for first- and second-year medical students. POMP pairs ten students with a preceptor for a period of two years. The course consists of clinical observation, didactic presentation, and small-group discussion. Ethics, history- taking, and physical diagnosis are part of the curriculum. The preceptors for the physical diagnosis portion are faculty or community physicians in family practice, general internal medicine, or pediatrics.

Through collaboration with the Wisconsin Academy of Family Physicians, the medical college has developed a summer externship in family practice. The externship takes place during the summer between the first and second years of medical school. Students selecting the externship are paired with a practicing family physician in the community and receive a stipend. Students who participated in this experience have been more likely to select generalist careers. A similar program recently has been developed for general internal medicine in conjunction with the Wisconsin Society of Internal Medicine.

A third-year one-month clerkship in ambulatory medicine recently has been added to the curriculum. This clerkship pairs students with a faculty preceptor in general internal medicine or family practice.

Students can also participate in the Community Health Outreach Services (CHOS) program. This program allows medical students to work with generalist faculty members in a volunteer capacity to deliver free medical services at several community clinics.

The medical college recently established an Educational Debt Reduction Program for students who indicate a firm interest in family practice, match with a Medical College of Wisconsin residency in family practice, and remain in the community to practice. Under this program, students are eligible for up to $34,000 in debt reduction.

For additional information contact: John E. Midtling, M.D., M.S., Professor and Chairman, Department of Family and Community Medicine, 8701 Watertown Plank Road, Milwaukee, Wisconsin 53226.

At the **UNIVERSITY OF WISCONSIN MEDICAL SCHOOL**, students spend time with primary care role models in an interdepartmental third-year primary care clerkship. Through a joint effort of the departments of family medicine, internal medicine, and pediatrics, students are placed directly in practice settings with primary care physicians. Along with the clinical experience a structured core curriculum is taught in small groups.

The clerkship was recently discussed in *Academic Medicine* 67(October 1992):639-641.

For additional information contact: Carl T. Getto, M.D., Associate Dean-Clinical Affairs, University of Wisconsin Medical School, 1300 University Ave., Madison, Wisconsin 53706.

INDEX OF EXISTING GENERALIST INITIATIVES AND REVISED PROGRAMS

Administrative structure, family medicine
Indiana University School of Medicine 17

Administrative structure, medicine
Washington University School of Medicine 31

Admissions, brochures/admissions information
University of California, San Diego, School of Medicine 4
Mercer University School of Medicine 12
University of Medicine and Dentistry, Robert Wood Johnson Medical School 34

Admissions, committee
Boston University School of Medicine 23
University of Massachusetts Medical School 25
University of Washington School of Medicine 70

Admissions, criteria
Tufts University School of Medicine 26
University of Virginia School of Medicine 69

Admissions, preferential selection programs
University of South Alabama School of Medicine 3
University of Miami School of Medicine 10
Southern Illinois University School of Medicine 16
University of Iowa College of Medicine 18
Boston University School of Medicine 23
University of Massachusetts Medical School 25
Wayne State University School of Medicine 27
University of Minnesota, Duluth, School of Medicine 28
Washington University School of Medicine 31
University of Nebraska College of Medicine 32
State University of New York, Health Science Center at Syracuse, College of Medicine 43
East Carolina University School of Medicine 45
University of Oklahoma College of Medicine 50
Hahnemann University School of Medicine 51
Jefferson Medical College 52
University of Pittsburgh School of Medicine 57
Temple University School of Medicine 57
Medical University of South Carolina College of Medicine 59
University of South Carolina School of Medicine 60
Meharry Medical College School of Medicine 61
University of Texas Medical School at Houston 67
University of Washington School of Medicine 70

Area Health Education Centers (AHECs)
University of Colorado School of Medicine 6
University of South Florida College of Medicine 11
University of Kentucky College of Medicine 19
University of Louisville School of Medicine 19-20
Louisiana State University School of Medicine in Shreveport 21
Boston University School of Medicine 23
University of North Carolina School of Medicine 47
Medical College of Ohio 48

Medical University of South Carolina College of Medicine 59
Meharry Medical College School of Medicine 61
University of Texas Medical School at Galveston 66
University of Virginia School of Medicine 69

Clerkships, ambulatory (interdisciplinary)

University of Florida College of Medicine 10
University of Minnesota Medical School-Minneapolis 28
Creighton University School of Medicine 32
Dartmouth Medical School 33
Albert Einstein College of Medicine 38
University of Rochester School of Medicine and Dentistry 41
State University of New York Health Science Center at Brooklyn 41
State University of New York at Buffalo School of Medicine 42
Duke University School of Medicine 45
University of North Carolina School of Medicine 47
University of Oklahoma College of Medicine 50
Hahnemann University School of Medicine 51
University of Pittsburgh School of Medicine 57
University of South Dakota School of Medicine 60
Texas Tech University Health Science Center College of Medicine 64
Marshall University School of Medicine 71
Medical College of Wisconsin 73

Clerkships, community medicine, prevention

Boston University School of Medicine 23
University of Nebraska College of Medicine 32
University of New Mexico School of Medicine 35
University of Rochester School of Medicine and Dentistry 41
Universidad Central del Caribe School of Medicine 58
Brown University School of Medicine 58
University of South Dakota School of Medicine 61
Meharry Medical College School of Medicine 62
Medical College of Virginia School of Medicine 69
University of Wisconsin Medical School 73

Clerkships, family medicine

University of Arizona College of Medicine 3
University of Colorado School of Medicine 6
University of Florida College of Medicine 10
Mercer University School of Medicine 12
University of Illinois, Chicago, College of Medicine 15
Southern Illinois University School of Medicine 17
University of Louisville School of Medicine 20
Uniformed Services University of the Health Sciences 22
University of Massachusetts Medical School 24
Michigan State University College of Human Medicine 26
Wayne State University School of Medicine 27
Mayo Medical School 28
University of Mississippi School of Medicine 29
University of Missouri-Kansas City School of Medicine 30
Creighton University School of Medicine 32
University of Nevada College of Medicine 33
Dartmouth Medical School 33
University of Medicine and Dentistry of New Jersey, Robert Wood Johnson 35
Bowman Gray School of Medicine 44
East Carolina University School of Medicine 45
University of North Carolina School of Medicine 47
Medical College of Ohio 48
Northeastern Ohio Universities College of Medicine 49
University of Oklahoma College off Medicine 50
Jefferson Medical College 53
Pennsylvania State University College of Medicine 54

Temple University School of Medicine 57
Universidad Central del Caribe School of Medicine 58
Medical University of South Carolina College of Medicine 59
University of South Carolina School of Medicine 60
East Tennessee State University James H.Quillen College of Medicine 61
Meharry Medical College School of Medicine 62
Vanderbilt University School of Medicine 63
Texas A & M University Health Science Center College of Medicine 63
Texas Tech University Health Sciences Center School of Medicine 64
University of Texas Southwestern Medical Center at Dallas Medical School 65
University of Texas Medical School at Galveston 66
University of Texas Medical School at Houston 67
University of Vermont College of Medicine 68
University of Washington School of Medicine 71

Clerkships, medicine

University of Arizona College of Medicine 3
University of California, San Diego, School of Medicine 4
Yale University School of Medicine 7
University of Miami School of Medicine 10
Mercer University School of Medicine 12
Indiana University School of Medicine 17
University of Louisville School of Medicine 20
Uniformed Services University of the Health Sciences 22
University of Massachusetts Medical School 25
Wayne State University School of Medicine 27
Mayo Medical School 28
University of Medicine and Dentistry of New Jersey, Robert Wood Johnson 35
Albert Einstein College of Medicine 38
New York Medical College 40
University of Rochester School of Medicine and Dentistry 41
East Carolina University School of Medicine 46
University of North Carolina School of Medicine 47
Pennsylvania State University College of Medicine 55
Temple University School of Medicine 57
Universidad del Caribe School of Medicine 58
University of South Carolina School of Medicine 60
Texas A & M University Health Science Center College of Medicine 63
Texas Tech University Health Sciences Center School of Medicine 64
University of Texas Southwestern Medical Center at Dallas Medical School 65
University of Texas Medical School at Galveston 66
University of Vermont College of Medicine 68
University of Washington School of Medicine 71
University of Wisconsin Medical School 73

Clerkships, pediatrics

University of California, San Diego, School of Medicine 4
University of Miami School of Medicine 10
Mercer University School of Medicine 12
Indiana University School of Medicine 17
University of Louisville School of Medicine 20
Uniformed Services University of the Health Sciences 22
University of Massachusetts Medical School 24
Mayo Medical School 28
Dartmouth Medical School 33
University of Medicine and Dentistry of New Jersey, Robert Wood Johnson 35
Albert Einstein College of Medicine 38
New York Medical College 40
University of Rochester School of Medicine and Dentistry 41
Duke University School of Medicine 45
East Carolina University School of Medicine 45-46
University of North Carolina School of Medicine 47

Medical College of Pennsylvania 53
Pennsylvania State University College of Medicine 55
Temple University School of Medicine 58
Universidad Central del Caribe School of Medicine 58
University of South Carolina School of Medicine 60
Texas Tech University Health Sciences Center School of Medicine 64
University of Texas Southwestern Medical Center at Dallas Medical School 65
University of Vermont College of Medicine 68
University of Washington School of Medicine 71

Clerkships, primary care
University of California, San Francisco, School of Medicine 5
University of Colorado School of Medicine 6
University of Connecticut School of Medicine 7
Yale University School of Medicine 7
George Washington University School of Medicine and Health Sciences 8
Georgetown University School of Medicine 9
University of Miami School of Medicine 10
University of South Florida College of Medicine 10
University of Kentucky College of Medicine 19
Boston University School of Medicine 23
Harvard Medical School 24
Michigan State University College of Human Medicine 26
University of Michigan Medical School 27
Dartmouth Medical School 33
Albany Medical College 37
University of Rochester School of Medicine and Dentistry 41
State University of New York at Stony Brook Health Sciences Center 43
State University of New York Health Science Center at Syracuse 44
East Carolina University School of Medicine 46
Pennsylvania State University College of Medicine 55
University of Wisconsin Medical School 73

Collaboration with other health professions, schools
Michigan State University College of Human Medicine 26

Combined MD/MPH programs
Tufts University School of Medicine 25
University of Medicine and Dentistry of New Jersey, Robert Wood Johnson 35

Community service programs
Stanford University School of Medicine 6
University of Connecticut School of Medicine 7
Rush Medical College 16
Washington University School of Medicine 31
State University of New York Health Science Center at Syracuse 43
Wright State University School of Medicine 49
Medical College of Pennsylvania 53, 54
Meharry Medical College School of Medicine 61
University of Washington School of Medicine 70

Consortia, medical education
State University of New York at Buffalo School of Medicine 42

Continuing medical education
Louisiana State University School of Medicine in Shreveport 22
University of Nevada School of Medicine 33
East Carolina University School of Medicine 47
Pennsylvania State University College of Medicine 54, 56
Medical University of South Carolina College of Medicine 59
Texas Tech University Health Sciences Center School of Medicine 65

Curriculum, community health and continuity of care
University of Miami School of Medicine 10
University of South Florida College of Medicine 10
University of Illinois, Rockford, College of Medicine 15

Curriculum, flexible
Stanford University School of Medicine 5

Curriculum, general information
University of Iowa College of Medicine 18
University of Louisville School of Medicine 20
University of New Mexico School of Medicine 35
Medical College of Pennsylvania School of Medicine 53

Curriculum, problem-based learning
University of Hawaii John A. Burns School of Medicine 13
Rush Medical College 16
Dartmouth Medical School 33
Bowman Gray School of Medicine 44
University of Pittsburgh School of Medicine 57
Brown University School of Medicine 58
University of South Dakota School of Medicine 60
University of Texas Southwestern Medical Center at Dallas 65

Curriculum, rural
University of Minnesota Medical School-Minneapolis 28
State University of New York at Buffalo School of Medicine 42
State University of New York Health Science Center at Syracuse 43
Marshall University School of Medicine 71
West Virginia University School of Medicine 72

Faculty development
Temple University School of Medicine 57

Faculty recruitment, retention and recognition
Stanford University School of Medicine 6
University of Hawaii John A. Burns School of Medicine 14
University of Texas Medical School at Galveston 66-67

Fellowships, family medicine
Marshall University School of Medicine 71

Fellowships, medicine
Washington University School of Medicine 31

Fellowships, primary care
East Carolina University School of Medicine 47

Institute, primary care
Temple University School of Medicine 57
University of Virginia School of Medicine 69

Integrated (accelerated) BA/MD programs
Boston University School of Medicine 23
University of Missouri, Kansas City, School of Medicine 30
Northeastern Ohio Universities College of Medicine 48
Brown University School of Medicine 58

Integrated (accelerated) MD/family medicine residency programs
University of Kentucky College of Medicine 19
Creighton University School of Medicine 32
University of Nebraska College of Medicine 32

East Carolina University School of Medicine 46-47
Pennsylvania State University College of Medicine 56
Medical University of South Carolina College of Medicine 59
Marshall University School of Medicine 71

Integrated (accelerated) MD/medicine residency programs
University of Kentucky College of Medicine 19
University of Nebraska College of Medicine 32
New York Medical College 40
Pennsylvania State University College of Medicine 56

Integrated (accelerated) MD/pediatrics residency program
Pennsylvania State University College of Medicine 56

Loan and scholarship programs
University of Arkansas College of Medicine 3
Howard University College of Medicine 9
University of Health Sciences/Chicago Medical School 14
University of Iowa College of Medicine 18
University of Kansas Medical Center School of Medicine 18
University of Maryland School of Medicine 22
University of Massachusetts Medical School 25
University of Minnesota Medical School-Minneapolis 29
University of Mississippi School of Medicine 29
University of Missouri, Columbia, School of Medicine 30
Washington University School of Medicine 31
University of Nebraska College of Medicine 32
University of New Mexico School of Medicine 36
Cornell University Medical College 39
New York Medical College 40
East Carolina University School of Medicine 45, 47
Medical College of Ohio 48
University of Oklahoma College of Medicine 50
Jefferson Medical College 52
University of Pennsylvania School of Medicine 56
Pennsylvania State University College of Medicine 56
Universidad Central del Caribe School of Medicine 58
University of South Carolina College of Medicine 60
University of Tennessee College of Medicine 62
Texas Tech University Health Sciences Center School of Medicine 64
University of Utah School of Medicine 67
Medical College of Virginia 69
Medical College of Wisconsin 73

Mentoring programs
University of Louisville School of Medicine 19
Boston University School of Medicine 23
Michigan State University College of Human Medicine 26
Mount Sinai School of Medicine 39
Medical College of Pennsylvania 54
Brown University School of Medicine 58
Texas Tech University Health Sciences Center School of Medicine 64

Mission, primary care
University of Florida College of Medicine 9
Mercer University School of Medicine 12
University of Hawaii John A. Burns School of Medicine 13
University of Iowa College of Medicine 18
Michigan State University College of Human Medicine 26
Dartmouth Medical School 33
Wright State University School of Medicine 49

Practice entry, consultation assistance
Washington University School of Medicine 31
University of Nevada School of Medicine 33
East Carolina University School of Medicine 46
Pennsylvania State University College of Medicine 56
Medical University of South Carolina College of Medicine 59

Practice entry, disincentives of generalism (study of)
Medical College of Georgia School of Medicine 12

Practice entry, financial assistance and reimbursement (see also loan and scholarship programs)
University of Arkansas College of Medicine 4
University of Louisville School of Medicine 20
Washington University School of Medicine 31
University of New Mexico School of Medicine 36
East Carolina University School of Medicine 47
University of South Carolina School of Medicine 60
Texas A & M University Health Science Center College of Medicine 63

Practice entry, information retrieval and access
Pennsylvania State University College of Medicine 56
Medical University of South Carolina College of Medicine 59
University of South Carolina School of Medicine 60

Practice entry, locum tenens
University of South Carolina School of Medicine 60

Practice entry, physician recruitment
Southern Illinois University School of Medicine 17
Hahnemann University School of Medicine 52

Pre-clinical courses
University of California, San Diego, School of Medicine 4
University of Southern California School of Medicine 5
Stanford University School of Medicine 5
University of Connecticut School of Medicine 7
George Washington University School of Medicine and Health Sciences 8
Georgetown University School of Medicine 9
Mercer University School of Medicine 12
Northwestern University Medical School 16
Rush Medical College 16
Southern Illinois University School of Medicine 16
Indiana University School of Medicine 17
University of Kentucky College of Medicine 19
University of Louisville School of Medicine 19-20
Uniformed Services University of the Health Sciences 22
Boston University School of Medicine 23
Michigan State University College of Human Medicine 26
Mayo Medical School 28
University of Missouri, Kansas City, School of Medicine 30
Washington University School of Medicine 31
Dartmouth Medical School 33
University of Medicine and Dentistry of New Jersey, Robert Wood Johnson 34
Albert Einstein College of Medicine 38
New York Medical College 40
University of Rochester School of Medicine and Dentistry 41
State University of New York at Buffalo School of Medicine 42
State University of New York at Stony Brook Health Sciences Center 43
Bowman Gray School of Medicine 44
East Carolina University School of Medicine 45-46
Wright State University School of Medicine 49

University of Oklahoma College of Medicine 50
Pennsylvania State University College of Medicine 54-55
Temple University School of Medicine 57
Brown University School of Medicine 58
University of South Carolina School of Medicine 60
East Tennessee State University James H. Quillen College of Medicine 61
Meharry Medical College School of Medicine 62
Vanderbilt University School of Medicine 62
Texas A & M University Health Science Center College of Medicine 63
Texas Tech University Health Sciences Center School of Medicine 64
University of Texas Southwestern Medical Center at Dallas 65
University of Texas Medical School at Galveston 66
University of Vermont College of Medicine 68
Medical College of Virginia 68
University of Washington School of Medicine 70
Marshall University School of Medicine 71-72
Medical College of Wisconsin 73

Preceptorships, community health
University of Massachusetts Medical School 24-25
University of Vermont College of Medicine 68

Preceptorships, family medicine
University of Connecticut School of Medicine 7
Yale University School of Medicine 7
Mayo Medical School 28
University of Minnesota, Duluth, School of Medicine 28
University of Mississippi School of Medicine 29
University of Missouri, Columbia, School of Medicine 29
University of Missouri, Kansas City, School of Medicine 30
State University of New York at Stony Brook Health Sciences Center 43
Medical College of Ohio 48
Wright State University School of Medicine 49
Medical College of Pennsylvania 53
Pennsylvania State University College of Medicine 54
Texas Tech University Health Sciences Center School of Medicine 64
University of Texas Medical School at Galveston 66
University of Vermont College of Medicine 68
University of Virginia School of Medicine 69
Medical College of Wisconsin 73

Preceptorships, medicine
Medical College of Wisconsin 73

Preceptorships, primary care
Georgetown University School of Medicine 9
Mercer University School of Medicine 12
University of Nevada School of Medicine 33
Northeastern Ohio Universities College of Medicine 49
Vanderbilt University School of Medicine 62, 63
Texas A & M University Health Science Center College of Medicine 63
West Virginia University School of Medicine 72

Preceptorships, rural primary care
Louisiana State University School of Medicine in Shreveport 21
University of Oklahoma College of Medicine 50
University of Washington School of Medicine 70
Marshall University School of Medicine 71

Research, primary care
Medical College of Virginia School of Medicine 69

Residency, family practice
University of California, San Diego, School of Medicine 5
University of South Florida College of Medicine 11
Morehouse School of Medicine 13
University of Louisville School of Medicine 21
University of Massachusetts Medical School 24, 25
University of Mississippi School of Medicine 29
University of Nevada School of Medicine 33
University of New Mexico School of Medicine 35, 36
East Carolina University School of Medicine 46
Temple University School of Medicine 57
Universidad Central del Caribe School of Medicine 58
Brown University School of Medicine 59
Meharry Medical College School of Medicine 62
Texas Tech University Health Sciences Center School of Medicine 64
Medical College of Virginia 69
Marshall University School of Medicine 71

Residency, general information
University of Iowa College of Medicine 18
Harvard Medical School 24
Hahnemann University School of Medicine 52
University of Virginia School of Medicine 70

Residency, medicine
University of Arizona College of Medicine 3
University of California, San Diego, School of Medicine 5
George Washington University School of Medicine and Health Sciences 8
University of Louisville School of Medicine 19-20
Louisiana State University School of Medicine in Shreveport 21
Boston University School of Medicine 24
University of Massachusetts Medical School 25
Washington University School of Medicine 31
University of Nevada School of Medicine 33
University of New Mexico School of Medicine 35-36
Hahnemann University School of Medicine 52
Medical College of Pennsylvania 53
Brown University School of Medicine 59
Texas Tech University Health Sciences Center School of Medicine 65
Medical College of Virginia 69
University of Virginia School of Medicine 70

Residency, pediatrics
University of California, San Diego, School of Medicine 5
George Washington University School of Medicine 8
University of Louisville School of Medicine 19-20
Boston University School of Medicine 24
University of Massachusetts Medical School 25
Washington University School of Medicine 31
University of New Mexico School of Medicine 36
Pennsylvania State University College of Medicine 55
Vanderbilt University School of Medicine 63
Texas Tech University Health Sciences Center School of Medicine 64-65
Medical College of Virginia 69

Student enrichment (high school and college)
University of Louisville School of Medicine 19-20
Northeastern Ohio Universities College of Medicine 49
Meharry Medical College School of Medicine 61

Student interest groups, family medicine
Yale University School of Medicine 8
Georgetown University School of Medicine 9
Mount Sinai School of Medicine 39
Northeastern Ohio Universities College of Medicine 49
Pennsylvania State University College of Medicine 54
Meharry Medical College School of Medicine 62

Student interest groups, medicine
Washington University School of Medicine 31
Pennsylvania State University School of Medicine 54

Student interest groups, pediatrics
Mayo Medical School 28
Texas Tech University Health Sciences Center School of Medicine 64

Student interest groups, primary care
Mayo Medical School 28

Subinternships, family medicine
Jefferson Medical College 53
Texas Tech University Health Sciences Center School of Medicine 64

Subinternships, medicine
Mayo Medical School 28
Duke University School of Medicine 45
East Tennessee State University James H. Quillen College of Medicine 61

Subinternships, pediatrics
Texas Tech University Health Sciences Center School of Medicine 64

Task force
University of South Alabama School of Medicine 3
George Washington University School of Medicine and Health Sciences 8
Indiana University School of Medicine 17
Mount Sinai School of Medicine 39
Vanderbilt University School of Medicine 62
University of Texas Medical School at Houston 67

INDEX OF NEWLY ESTABLISHED OR PROPOSED GENERALIST INITIATIVES

Administrative structure, ambulatory care and prevention
Harvard Medical School 24

Administrative structure, family medicine
Albert Einstein College of Medicine 38
Medical College of Pennsylvania 54

Administrative structure, medicine
Bowman Gray School of Medicine 45

Administrative structure, pediatrics
Albert Einstein College of Medicine 38

Admissions, brochures/admissions information
Hahnemann University School of Medicine 51

Admissions, committee
University of Florida College of Medicine 9
Medical College of Georgia School of Medicine 11
Dartmouth Medical School 34
University of New Mexico School of Medicine 35
East Carolina University School of Medicine 46
Hahnemann University School of Medicine 51

Admissions, criteria
University of Florida College of Medicine 9
Medical College of Georgia School of Medicine 11
University of New Mexico School of Medicine 35
Hahnemann University School of Medicine 51
University of Tennessee College of Medicine 62

Admissions, preferential selection programs
Medical College of Georgia School of Medicine 11
Morehouse School of Medicine 13
University of Illinois, Rockford, College of Medicine 15
University of Louisville School of Medicine 20
State University of New York at Buffalo School of Medicine 42
Bowman Gray School of Medicine 44
Case Western Reserve University School of Medicine 48
Northeastern Ohio Universities College of Medicine 49
Pennsylvania State University College of Medicine 55
Texas A & M University Health Science Center College of Medicine 63
University of Texas Medical School at Galveston 66
Medical College of Wisconsin 73

Ambulatory Care Center
Medical University of South Carolina College of Medicine 59

Clerkships, ambulatory (interdisciplinary)
Medical College of Georgia School of Medicine 11
University of Massachusetts Medical School 25
University of Pittsburgh School of Medicine 57
University of Texas Medical School at Galveston 66

Clerkships, community medicine, prevention
University of North Carolina School of Medicine 47
Texas Tech University Health Sciences Center School of Medicine 64

Clerkships, family medicine
Stanford University School of Medicine 6
Georgetown University School of Medicine 9
University of Health Sciences/Chicago Medical School 14
Indiana University School of Medicine 17
Albert Einstein College of Medicine 38
Oregon Health Sciences University School of Medicine 50
Hahnemann University School of Medicine 52
Medical College of Pennsylvania 54
University of Pittsburgh School of Medicine 57

Clerkships, primary care
University of California, San Diego, School of Medicine 4
University of Southern California School of Medicine 5
Medical College of Georgia School of Medicine 11
Northwestern University Medical School 16
Columbia University College of Physicians and Surgeons 39
Oregon Health Sciences University School of Medicine 50
University of Virginia School of Medicine 70

Collaboration with other health professions, schools
Morehouse School of Medicine 13
University of Hawaii John A. Burns School of Medicine 14
Marshall University School of Medicine 72
West Virginia University School of Medicine 72

Combined MD/MPH programs
George Washington University School of Medicine and Health Sciences 8
Case Western Reserve University School of Medicine 48

Continuing medical education
University of Iowa College of Medicine 18
Hahnemann University School of Medicine 52

Curriculum, community health, continuity of care
Morehouse School of Medicine 13
University of Hawaii John A. Burns School of Medicine 13
University of Illinois, Chicago, College of Medicine 15
Northwestern University Medical School 16
Tufts University School of Medicine 26
Albany Medical College 37

Curriculum, general information
Dartmouth Medical School 34
Oregon Health Sciences University School of Medicine 50
Pennsylvania State University College of Medicine 55
Universidad Central del Caribe School of Medicine 58
University of Tennessee College of Medicine 62
University of Texas Medical School at Galveston 66
University of Texas Medical School at Houston 67

University of Virginia School of Medicine 70
Marshall University School of Medicine 72
West Virginia University School of Medicine 72

Curriculum, other special programs
University of Health Sciences/Chicago Medical School 14

Curriculum, problem-based learning
Morehouse School of Medicine 13
State University of New York at Brooklyn College of Medicine 41
Marshall University School of Medicine 72
West Virginia University School of Medicine 72

Curriculum, rural track
University of Illinois, Rockford, College of Medicine 15
East Tennessee State University James H. Quillen College of Medicine 61

Faculty development
Morehouse School of Medicine 13

Faculty recruitment, retention and recognition
University of Florida College of Medicine 10
University of Iowa College of Medicine 18
Hahnemann University School of Medicine 52

Fellowships, family medicine
Morehouse School of Medicine 13

Fellowships, medicine
Morehouse School of Medicine 13
Louisiana State University School of Medicine in Shreveport 21

Fellowships, pediatrics
Morehouse School of Medicine 13

Fellowships, primary care
Medical College of Georgia 12
University of New Mexico School of Medicine 36
University of Texas Medical School at Houston 67

Health policy
Case Western Reserve University School of Medicine 48

Integrated (accelerated) BA/MD programs
Hahnemann University School of Medicine 51
Pennsylvania State University College of Medicine 55

Integrated (accelerated) MD/family medicine residency programs
Michigan State University College of Human Medicine 27
University of Missouri-Columbia School of Medicine 30
Medical College of Ohio 48

Integrated (accelerated) MD/medicine residency programs
Michigan State University College of Human Medicine 27
Medical College of Pennsylvania 54

Integrated (accelerated) MD/pediatrics residency program
University of Missouri-Columbia School of Medicine 30

Integrated (accelerated) MD/residency program (specialty not specified)
Medical College of Georgia School of Medicine 12

Loan and scholarship programs
University of California, Los Angeles, School of Medicine 4
University of Southern California School of Medicine 5
Medical College of Georgia School of Medicine 11
University of Louisville School of Medicine 20
Harvard Medical School 24
Case Western Reserve University School of Medicine 48

Mentoring programs
State University of New York at Buffalo School of Medicine 42
East Carolina University School of Medicine 46
Case Western Reserve University School of Medicine 48
Hahnemann University School of Medicine 52
Marshall University School of Medicine 71

Practice environment, consultation assistance
State University of New York at Buffalo School of Medicine 43

Practice environment, financial assistance and reimbursement (see also loan and scholarship programs)
Medical College of Georgia School of Medicine 12
Boston University School of Medicine 24
Tufts University School of Medicine 26
Dartmouth Medical School 34
State University of New York at Buffalo School of Medicine 43

Practice environment, information retrieval and access
Medical College of Georgia School of Medicine 12

Practice environment, locum tenens
Tufts University School of Medicine 26
East Carolina University School of Medicine 45
Marshall University School of Medicine 72
West Virginia University School of Medicine 72

Practice environment, management support
Tufts University School of Medicine 26
State University of New York at Buffalo School of Medicine 43

Practice environment, physician recruitment
Boston University School of Medicine 24
State University of New York at Buffalo School of Medicine 42

Pre-clinical courses
University of Arizona College of Medicine 3
University of California, Los Angeles, School of Medicine 4
University of Florida College of Medicine 9-10
Medical College of Georgia School of Medicine 11
Louisiana State University School of Medicine in New Orleans 21
University of Michigan Medical School 27
Wayne State University School of Medicine 27
University of New Mexico School of Medicine 36
Albany Medical College 37
Columbia University College of Physicians and Surgeons 39
Case Western Reserve University School of Medicine 48
Medical College of Ohio 48
Oregon Health Sciences University School of Medicine 50
Hahnemann University School of Medicine 51
University of Pittsburgh School of Medicine 57
University of Texas Medical School at Houston 67
University of Virginia School of Medicine 69
West Virginia University School of Medicine 72

Preceptorships, primary care
Louisiana State University School of Medicine in New Orleans 21
State University of New York at Buffalo School of Medicine 42
Pennsylvania State University College of Medicine 55
University of Pennsylvania School of Medicine 56
University of Tennessee College of Medicine 62
University of Virginia School of Medicine 69

Preceptorships, rural primary care
University of New Mexico School of Medicine 36

Residency, family practice
Boston University School of Medicine 23
Tufts University School of Medicine 26
Mount Sinai School of Medicine 40
State University of New York at Buffalo School of Medicine 42
Hahnemann University School of Medicine 52
University of Texas Medical School at Galveston 66, 67

Residency, general information
Medical College of Georgia School of Medicine 11
Tufts University School of Medicine 26
University of New Mexico School of Medicine 36
Albany Medical College 37,38
Duke University School of Medicine 45
Pennsylvania State University College of Medicine 55
University of Texas Medical School at Galveston 66, 67

Residency, medicine
Morehouse School of Medicine 13
Dartmouth Medical School 34
State University of New York at Buffalo School of Medicine 42

Residency, pediatrics
Morehouse School of Medicine 13
State University of New York at Buffalo School of Medicine 42

Student enrichment (high school and college)
Dartmouth Medical School 34
University of New Mexico School of Medicine 35
State University of New York at Buffalo School of Medicine 42
East Carolina University School of Medicine 46
Pennsylvania State University College of Medicine 55
University of Texas Medical School at Galveston 66

Student interest groups, primary care
Harvard Medical School 24

Subinternships, medicine
Hahnemann University School of Medicine 52

Task force
University of Florida College of Medicine 9
Mayo Medical School 28